

Exploring Service Change, Older People's Access and Impact: Does Rurality Matter?

Charlotte Hamilton

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University of York

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Abstract

Previous research has highlighted closures and changes to the provision of 'everyday' services in rural areas. Service reconfiguration may disproportionately affect older people, who are overrepresented in the rural population. Research has shown that older people value opportunities for social interaction such local services offer alongside their instrumental value. Published literature has not examined the impact of changes to diverse private and public services both individually and cumulatively. This research is placed in the context of existing social policies pertinent to rural service provision.

This thesis adopts a mixed methods approach with a convergent parallel design. The quantitative strand draws on data compiled by the Commission for Rural Communities, a Freedom of Information response from the Post Office and the English Longitudinal Study of Ageing to examine the context of service change in England and older people's perceptions of access. The qualitative strand uses a case study of a rural village that has experienced change in service provision to explore the impact on older residents. Drawing together the inferences from all data sources, it becomes apparent that there is a wide range of potential impacts (and unintended consequences) of service change. Everyday services are interrelated and can result in cumulative change or closure. Alternative forms of provision, such as mobile services, need more consideration and community consultation before their implementation. Finally, this research highlights the diversity of rural older age in affecting the impact of change; differences in rurality and older age increase the complexity. By using multiple research approaches, data sources and analysis techniques, this thesis can take a holistic approach to examining the service environment. Objective and subjective impacts are considered, from the perspective of older people in the community.

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This thesis is the sole work of the author and has not been submitted for examination at this or another institution for another award. All sources are acknowledged as references.

1 Introduction

The United Kingdom is an ageing nation, but it is not ageing at an equal rate; rural areas are ageing faster than urban areas (ONS, 2012; Blake, 2009; Champion and Shepherd, 2006; RERC, 2005). This trend is still observed when England is examined separately from the rest of the UK (see Champion and Shepherd, 2006; RERC, 2005). As a result, older people are overrepresented in rural areas of England (see Defra, 2013a). In parallel, rural areas are undergoing changes to the local service environment. ‘Everyday’ services, such as banks, shops and Post Offices are decreasing in favour of centralised and online access (see BBC, 2014a; BBC, 2014b; BIS, 2010; Meneely et al., 2009; Wilson et al., 2004). Policy in this area lacks a focus on the crossover of ageing in changeable rural environments, and its implications.

In this context, it is vital to explore the issue of ‘everyday’ service change and the possible impact on older people, with a particular focus on rurality, given the accelerated ageing of rural areas. This is an important area for social policy as there could be implications for the sustainability of people ageing in their communities. It is therefore crucial to consider ageing in the context of the environment in which it occurs. As such, the overall research aim is to contribute to the social gerontology literature on ageing in rural communities that have undergone service change; and to add to the social policy literature evidence on the role of policy in ensuring enabling, rural environments suitable for ageing.

This area of interest is explored by addressing three complementary research objectives, using mixed methods. The first route tracks service change at different time points, and uses a case example, to assess whether or not rural areas are more vulnerable to changes in the service environment than urban areas. The second strand examines whether there is a rural dimension to older people’s perceptions of their access to services as they age. The final course of enquiry explores the potential impacts of service change on older people living in rural communities. The findings from each of these strands are then drawn together to address the overarching research aim from different perspectives.

This introduction will outline the context of the study, including the issues around rural ageing, the changing service environment, relevant policies and the academic environment. This is followed by an explanation of the research aims and approach and an overview of the structure of the rest of the thesis.

1.1 Context

1.1.1 Rural ageing

The population of the UK is ageing, both by measures of the proportion of the population aged 65 and over and by the median age (ONS, 2012; Blake, 2009). Projections of the population suggest that this trend is likely to extend into the future (ONS, 2012). Population ageing in the UK has been attributed to increased longevity, meaning more people are reaching older age and living longer in older age, alongside low fertility rates meaning there are fewer young people (see ONS, 2012; Blake, 2009; Champion and Shepherd, 2006). As evidence of increased longevity, the population group with the fastest growth is those aged 85 and over (ONS, 2012; Blake, 2009).

The population of the UK is not ageing at a uniform rate. In 2010, Wales had the highest (and Northern Ireland the lowest) median age and proportion of its population aged 65 and over out of the constituent countries of the UK (ONS, 2012). The South West of England, however, had a higher median age than Wales overall in 2007 (Blake, 2009). Between 1985 and 2010, England had the steadiest rate of ageing compared with the rest of the UK (ONS, 2012). Population projections for the UK to 2035 predict a narrowing of the rates of ageing between the constituent countries (ONS, 2012).

Rates of ageing further differ within the countries of the UK. In England there are proportionately more older people in rural than in urban areas; 21 per cent of the rural population is aged 65 or over, compared with 15.3 per cent of the population of urban areas (Defra, 2013a). Even this sub-national trend disguises a wide degree of variation occurring at the Local Authority (LA) level. For example, in 2007, 30 per cent of the population of the LA of Christchurch was aged 65 and over, compared with just eight per cent of the population of

Tower Hamlets (Blake, 2009). Overall, England's rural population is growing and ageing at a faster rate than the urban population (Champion and Shepherd, 2006; RERC, 2005). Further, this trend is accelerated with increasing rurality; the more rural the area, the faster the rate of population ageing and growth (Champion and Shepherd, 2006; RERC, 2005).

Lifecycle-related migration patterns are the main reasons for the rural exacerbation of national ageing trends. On the one hand, young people are leaving rural areas in favour of urban lifestyles, appropriate employment and more affordable housing (Champion and Shepherd, 2006), thus decreasing the younger population in rural England. On the other hand, middle-aged and older people are moving from urban to rural areas (Champion and Shepherd, 2006). These older and middle-aged people continue to live in rural settings, whilst their children are likely to join the first migration trend and leave the country to return to urban centres (Champion and Shepherd, 2006). Together, these trends compound rural ageing through the attraction of mid-life and older people to rural areas and the exodus of young people to urban areas. These trends are also set to continue; population projections suggest that rural localities will have a faster growing and ageing population than the projections for urban England (Champion and Shepherd, 2006; RERC, 2005).

1.1.2 Changing rural service environment

Having a reasonable level of access to basic services is acknowledged as an integral element of an area's resources. Poor access to local services is included as part of the English Indices of Deprivation; 'Barriers to housing and services' is included as one of the seven domains because accessibility of suitable housing and local amenities are significant determinants of quality of life' (McLennan et al., 2011: 38). However, there has been a trend of loss of local services in rural areas, which could affect access (see Scharf and Bartlam, 2008; Joseph and Cloutier-Fisher, 2005). The decrease in rural, local services has seemingly been in favour of centralising such services in more urban locations; there is evidence to suggest that this has occurred with services such as banks, food shops and Post Offices (BBC, 2014a; BBC, 2014b; Meneely et

al., 2009; Wilson et al., 2004; BIS, 2010). The centralisation of services, away from rural areas, places a greater emphasis on mobility and transport, which could be problematic for some rural, older people (see Joseph and Cloutier-Fisher, 2005; Scharf and Bartlam, 2008; Manthorpe et al., 2008).

Centralising or losing services may be a reaction to the challenges to providers of delivering services in rural areas. These challenges centre around cost: it is more expensive to provide services in sparse, rural areas (Dwyer and Hardill, 2011; Rural Services Network, 2011; Age Concern and Help the Aged, 2005). This is compounded by the imbalance of grant funding allocated by central government away from rural areas (Rural Services Network, 2011). Dobbs and Strain (2008) give an example of the service provision dilemmas in rural areas:

‘A primary challenge for rural communities is to develop, implement and sustain older people-friendly alternative transportation systems with limited resources and in contexts that may include low population density and long distances to service centres’ (p. 93).

This shows the different considerations service providers may have when addressing service gaps in rural, as opposed to urban, areas.

Compounding the loss of services through centralisation, there has been a growth of services moving to, or expanding online. Whilst this could increase access to services via digital means, the effect for older people is muted. Only a minority of older people are current internet users (Dutton and Blank, 2011; Lane Fox, 2010; Ofcom, 2014). Further, older people are the least likely age group of internet users to access services online (Ofcom, 2014). Overall, this suggests that few older people are directly benefitting from the move or expansion of services online.

1.1.3 Policy

Whilst access to local services is acknowledged to have a link to quality of life (see McLennan et al., 2011), rural areas have undergone change in relation to such services. Combined with the faster ageing of rural areas (see Champion

and Shepherd, 2006; RERC, 2005), this suggests that there are significant numbers of older people ageing in rural environments that could be becoming more inaccessible in terms of local services. Whilst this could reasonably be an area of concern for social policies, there is little that addresses this combination of issues comprehensively. Instead, current social policy in England covers aspects of these issues in isolation from one another.

Broadly, social policies related to ageing have had a narrow focus (predominantly on providing pensions and care for older people) and have been set at the national level (see Stockdale, 2011). In this context, regional and rural differences can be overlooked, in favour of national approaches. More recently, and by contrast, Stockdale (2011) highlighted that issues related to ageing were becoming more integrated into general policies; however, this was noted to be predominantly in the devolved countries of the UK. This suggests that England persists with narrow, ageing-related policies whilst other countries in the UK have developed a more holistic approach, with ageing issues included in broader policies.

In relation to the future of rural areas, England uses the broad policy approach of rural proofing. Rural proofing procedures should mean that policymakers have considered the impact on rural areas of all new policies (Defra, 2012). The guidance for enacting rural proofing is broad, with no specific instruction on consulting local people or requirements for considering the needs of rural sub-populations, such as older people (see Defra, 2013c). In principle, rural proofing addresses the local service environment of rural areas, where the services are accountable to or owned by the state.

Further to the physical service environment, the government also has a policy covering digital access; government services are 'digital by default' as a cost savings measure (Cabinet Office, 2012). The outcome of this policy approach is that government services should be available online, with this means of access promoted. Alternative forms of access, such as via telephone, should still be available to customers who cannot be helped via digital access (Cabinet Office, 2012). The inference from the 'digital by default' policy is that online access is

preferable, however as outlined previously, older people are the least likely population group to access services online (Ofcom, 2014).

Separately from policies relating to the service environment, there is an 'ageing in place' agenda. These policies are aimed at supporting, and encouraging, older people to live in their own homes for as long as possible (DCLG, 2014). This policy approach suggests that older people should age in their own communities, but there is a lack of specificity for the implications of ageing in rural areas or in communities with depleting local services.

In the context outlined above, it is the intersections of older people living in rural communities that are undergoing service change that is of policy relevance. However, the policies of rural proofing, digital by default and ageing in place highlight different approaches that lack crossover. This could mean that the policy issue of ageing in changing rural environments is not being sufficiently addressed by the currently policy stances in England.

1.1.4 Academic environment

In the academic literature, Peace and colleagues (2007) suggest that there has been a trend in ageing research to ignore the environment and location of the older person. Research that is concerned with older people, ageing and the rural environment could reasonably locate itself within the crossover disciplines of environmental gerontology or geographical gerontology, or a combination of these.

Environmental gerontology's field of interest is the environment of ageing; this is not restricted to the physical, also including other aspects of the environment, such as social elements (Peace et al., 2007). This area covers the development of theories of the relationship and intersections between a person and their environment as they age, or as older people (Peace et al., 2007).

Environmental gerontology is inherently interdisciplinary, with contributions from the social sciences, biology and medicine; different disciplines have been more predominant in the field at different times since the early twentieth century (Peace et al., 2007).

As an overall field, environmental gerontology has a range of theoretical and methodological approaches; however, research has tended to focus on housing environments designed specifically for older people, with comparatively little study relating to ageing in different types of communities (Peace et al., 2007). Resulting from the narrow focus on specialised housing, Smith (2009) suggests that environmental gerontology has seen little recent theory development or methodological innovation. From these areas of criticism, my research can address underexplored areas of environmental gerontology through its interest in older people in rural communities.

Whilst environmental gerontology and geographical gerontology are referred to as distinct fields in the literature, there are many similarities in the interests and approaches of the disciplines. This area of study is acknowledged to be longstanding and interdisciplinary, including disciplines other than just geography and gerontology (Andrews et al., 2009). The shared history of the field of study is not clear-cut; the area has had ongoing negotiation, with the prominence shifting between disciplines. For example, geographical gerontology has been criticised for allowing the dominance of geography to overshadow the exploration of complexity that is within gerontology (Harper and Lawes, 1995). As a result of this, these 'contests most noticeably surface through the way the intersection is labelled, described and claimed by commentators' (Andrews et al., 2009). More recently, research in this area has used the term 'geographical gerontology', which is hoped to reflect the contributions of geography and gerontology more equally in the field (Andrews et al., 2009). Geographical gerontology thus describes the crossover of interests between human geography and gerontology, more specifically, 'the spatial and environmental contexts of ageing' (Wiles, 2005: 100).

The changing prominence of disciplines throughout the history of geographical gerontology is reflected in the research topics and approaches. The field was earlier dominated by studies at the macro level, using predominantly quantitative methodologies, however there has since been a broadening of the discipline's scope to allow for contesting existing theories and use of a greater range of methodologies (see Andrews et al., 2009; Wiles, 2005).

Research related to geographical gerontology has fluctuated in volume and popularity over time (Cutchin, 2009), similar to environmental gerontology. This could hint that both environmental and geographical gerontology are areas of interest, rather than having established disciplinary boundaries. This also could explain the seemingly close overlap between the focus of the areas and similarities in critiques. Across both environmental and geographical gerontology, there appears to have been little social and qualitative research in community contexts. This research falls within the remit of both geographical and environmental gerontology, but incorporates an interest in policy, something not explicitly covered in these fields.

1.2 Research aim and approach

This research aims to explore changes in the service environment, perceptions of access and the impact on older people, with a particular focus on the role of rurality within these areas. The research is timely as the Department for Rural Affairs has recently commissioned a study examining service provision for an ageing population (see Connors et al., 2013) and may contribute to policy-relevant evidence.

The research aim was addressed by three, complementary research objectives and utilises mixed methods. The first research objective was to assess whether there were differences in service changes between rural and urban areas. Data from the Commission for Rural Communities was analysed to demonstrate the average distances to everyday services, for different urban/rural classifications, at different time points stretching across roughly a decade. The case example of the Post Office was then used to demonstrate service loss and change in compulsory programmes, aimed at both rural and urban areas. The examination of the data for the Post Office explored the frequency and types of service change that occurred in urban and rural areas and assessed whether there were differences. The second research objective was to examine whether there was an urban/rural dimension to how older people perceive their access to local services. Four waves of the English Longitudinal Study of ageing were utilised to examine factors associated with difficulties accessing services and predictors

of experiencing a reduction in access to local services over time. The third research objective was to explore the possible impacts of service change on older people living in rural communities. A case study of a rural village was used to examine change and its consequences. The case study included a document review, interviews and focus groups with older people, and limited informal observation alongside researcher reflections.

As these research objectives are complementary, and all contribute to addressing the overall research aim, the inferences made on the basis of the findings for each objective were drawn together to form meta-inferences. Alongside the meta-inferences, the policy and theory implications were also explored across the research as a whole.

1.3 Structure

Following this introduction, chapter one reviews the relevant literature in relation to older people's access to services and rurality. The chapter is split into two sections, the first focuses on person-environment fit and its related theories and the second is directed towards issues of older people's access to services. Chapter two outlines the methodological approach of the research, providing a rationale for using a mixed methods approach comprising secondary data analysis and a case study.

Chapters three, four, five and six detail the empirical research of the study. Chapter three uses data from the Commission for Rural Communities and the Post Office to examine whether there are differences in the frequency and type of service change in rural and urban areas. Chapter four investigates what affects older people's perceptions of their own access to services, through cohort and longitudinal analysis of the English Longitudinal Study of Ageing. Chapter five details the background, and chapter six the findings, of a case study of a rural village that has undergone service change. The findings are based on a document review, focus groups and interviews with older people living in the case site along with observations of the place in the course of interview based methods.

Chapter seven discusses the findings and their relevance to the existing literature and policy. The chapter is split into two sections, the first draws together the findings from across the empirical chapters to explore where there may be meta-inferences. The second section sets the findings and meta-inferences in the context of the existing literature and policy to explore the implications of the research. An overall conclusion is then made, bringing together all aspects of the study.

2 Review of relevant literature

Proportionately more older people live in rural than urban areas and this overrepresentation is projected to increase (Defra, 2013a; RERC, 2005). It is therefore crucial to consider the ways in which people age in rural areas. This inevitably involves examining the ageing person, the environment in which they live and the intersection between these. Older people's access to services in rural areas is an area of intersection between the person and their environment, making both aspects important in our understanding of access and rural ageing.

The identification of relevant literature utilised both database and hand searches. The multidisciplinary nature of the topic, and the relative lack of cross-over of terms between fields, meant that hand searches yielded more useful studies. Where possible, literature is related to the UK and English context and supplemented by international research. The review includes research and theory articles from disciplines including gerontology, health sciences, geography, social work and social policy as well as research conducted in the third sector. This involved drawing together findings from different ontological and epistemological perspectives, research designs and methods. There is a distinct lack of pertinent policy in this area; where there are notable policies for England, these are woven into the relevant section of literature.

The review of the literature is split into two broad sections. The first examines person-environment fit and other theories relating to ageing in the community. The second focuses on issues of rurality, service change and access to services. The explorations of both sections of literature are followed by a discussion.

2.1 Part one: Person-environment fit and related theory

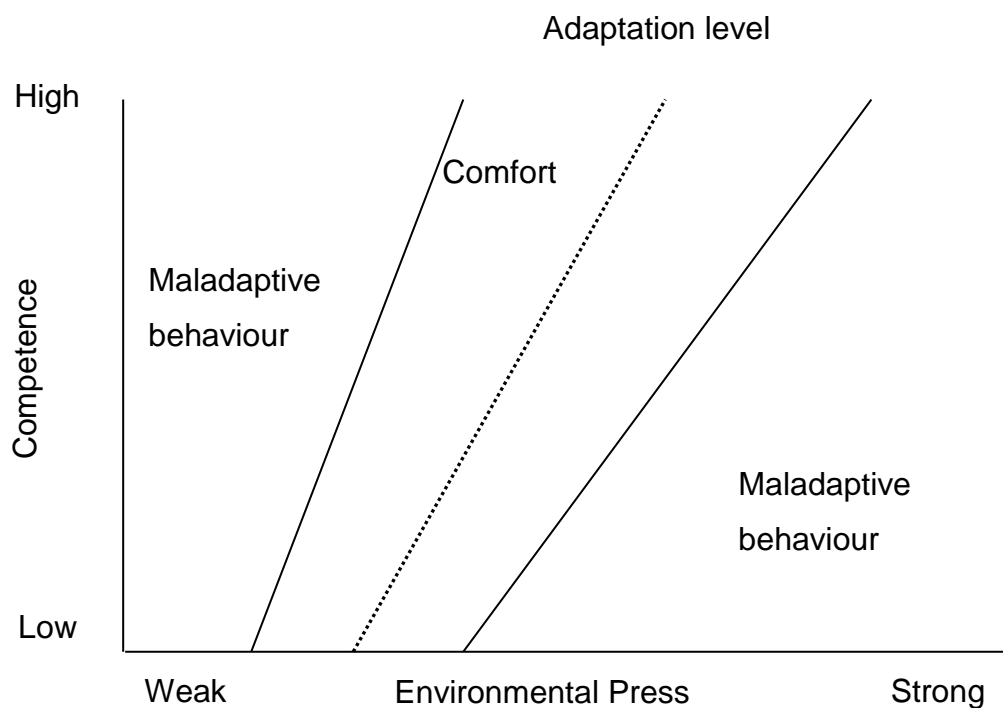
Person-environment fit and related theories are ways to describe the relationship between older people and their environment. These interactions are crucial to understanding ageing, but can be overlooked in research that focuses on older people separately from their setting of ageing (see Peace et al., 2007).

My review of the literature suggests that there is a focus on ageing in urban areas, with rural older people relatively under-researched.

2.1.1 Person-environment fit

Person-environment fit is a phrase that attempts to explain the level of harmony between the individual and the environment around them. The 'ecological model of ageing', remains the seminal work in this area (Moore, 2005). This model, represented diagrammatically in figure 2.1, initially developed by Lawton and Nahemow in 1973 (see Lawton, 1980) forms the basis for person-environment fit theory development:

Figure 2.1 Ecological model of ageing



Source: Adapted from Lawton, 1980

In the model, environmental press denotes the challenges of the environment and competence refers to the abilities or disabilities of the person (Lawton, 1980; Iwarsson, 2005). This model shows that slightly more press than the adaptation level will lead to greater performance from the individual, meaning that the person will overcome the extra press. Slightly less press will mean that

the individual is at ease with their environment. The adaptation level is the balance point where the individual has the ability to cope with the presses of the environment; large deviations from the adaptation level, however, will lead to maladaptive behaviour. In addition, the 'environmental docility hypothesis' (see Lawton, 1980) suggests that the level of competence of the individual affects the level of environmental press that can be overcome, with more 'competent' individuals being able to adapt to more challenging environments than those with lower competence levels. Further, the person and environment elements are linked to each other, as an environment could become more difficult for an individual, even if it remained objectively the same, if their competence level dropped. For example, a person may be comfortable with the level of environmental press but, after a stroke resulting in limited mobility, might find the environment more challenging; in this hypothetical case the environment press has remained the same but the personal competencies have decreased.

From the person-environment fit literature, there appear to be two key criticisms of this competence approach; firstly, that the environment is problematised by focusing on the 'press' and failing to recognise that the environment may have positive elements. Secondly, this approach has been criticised for the lack of agency given to the individual over their situation (see Cvitkovich and Wister, 2001; Iwarsson, 2005 for a summary of these arguments). By contrast, individual agency is an important aspect of person-environment fit for some theorists, which may also relate to the meaning people attach to place:

'individuals appear to actively regulate the quality, structure, and function of their social and physical environments and thereby enhance their social and physical resources' (Wahl and Lang, 2004: 3-4).

These criticisms are addressed by the congruence approach to person-environment fit (see Carp and Carp, 1984; Kahana, 1982):

'Simply stated, the competence approach [including Lawton (1980)] postulates that behaviour is the result of how the individual's level of competence matches the demands of the environment, whereas the

congruence approach contends that behaviour is the result of how the environment meets the needs of the individual' (Cvitkovich and Wister, 2001: 2).

This suggests that the two perspectives have a certain amount of basic agreement (even though the fundamental assumptions are different); this is a relationship between only two variables - the person and the environment - and that the outcome of this relationship is an effect on behaviour. Thus, in essence, the ecological model of ageing still stands, however an alternative perspective is applied, through the congruence approach, which suggests that the environment has something to offer in meeting the needs of the individual (Carp and Carp, 1984). In addition, the issue of agency is addressed by the congruence approach by suggesting that the individual could call upon 'both informal and formal support systems [to] serve mediating functions between the individual and external resources for meeting needs' (Carp and Carp, 1984). Further, it postulates that individuals choose, or are already in, environments that suit their needs (Carp and Carp, 1984; Kahana, 1982), therefore demonstrating the role of agency in person-environment fit theory.

In addition to addressing the criticisms of the competence approach, the congruence perspective also extends person-environment fit theory. The domains in which person-environment fit operates have developed over time.

Cvitkovich and Wister (2001) summarise previous research and theory into three broad areas:

Table 2.1 A summary table of Cvitkovich and Wister's (2001) explanation of the areas in which person-environment fit operates

Area	Components
Structural	Housing
	Neighbourhood

	Scope for community participation
Informal (support)	Family
	Friends
	Neighbours
Formal	Health and social care services

The importance of an individual's preference in the domains of person-environment fit was hypothesised by Kahana (1982) and later demonstrated by Cvitkovich and Wister (2001); older people prioritised 'fit' in the area that they most valued. For example, if an older person feels that having informal support is the most important aspect that would improve their quality of life, then not having this support would be perceived as being most detrimental to them (see Cvitkovich and Wister, 2001).

The boundaries of the terms 'person' and 'environment' do not appear to be theoretically fixed. Instead they are flexible to the research aims and the area of person-environment fit under study. This can be as restrictive as the home environment (for example, Iwarsson, 2012) or broadened to whole communities (for example, Keating et al., 2013). 'Person' can also be extended from the individual to include support networks (see Phillips et al., 2010).

The outcomes of person-environment fit are also broad and adaptable to different study objectives. Lawton's (1980) discussion of person-environment rather vaguely suggests that the outcome of fit is adaptive behaviour and a lack of fit is maladaptive behaviour. Carp and Carp (1984), however, suggest that the level of person-environment fit can satisfy lower order and higher order needs. Lower order needs are linked to being able to continue living independently, whilst higher order needs are well-being, good mental health,

and life satisfaction. The outcomes of person-environment fit tested empirically in the literature fall into these categories. Some of the literature examines 'lower order' outcomes such as performance of activities of daily living and independent functioning (Iwarsson, 2005; Pomeroy et al., 2011; Wahl et al., 2009), the potential for falls (Iwarsson et al., 2009), mortality (Rantakokko et al., 2013) and the accessibility of the environment (Iwarsson and Ståhl, 2003; Slaug et al., 2011). In addition to these studies, other authors have chosen to look at higher order outcomes such as well-being (Cvitkovich and Wister, 2001; Thomése and Broese van Groenou, 2006; Kahana, 1982; Werngren-Elgström et al., 2009) and residential satisfaction (Kahana et al., 2003).

Person-environment fit theory is still used to understand the lower and higher order needs of older people. The research undertaken with older people broadly falls into two categories, either testing or advancing the theory of person-environment fit or using the theory as a way of explaining certain behaviours or outcomes for older people. Those studies that are theory testing show support for person-environment fit: Thomése and Broese van Groenou (2006) found, through their secondary data analysis of the Longitudinal Aging Study Amsterdam (LASA), that older people did make environmental adjustments when their health declined. In addition, Wahl and colleagues' (2009) systematic review supported person-environment fit theory, as the impact of the environment on disability outcomes was understood better if person elements were taken into account. However, Rantakokko and colleagues (2013) found, in terms of outcomes, limited evidence that person-environment fit difficulties increased the risk of mortality in their study of very old people living alone in the community. Some of the theory testing studies suggests improvements as well as support: Jensen and colleagues' (2002) study of 20 older people assessed using varying means of transport found that person-environment fit concerns could be subjective, as participants and researchers noted different concerns of the same journeys. Slaug and colleagues (2011) used secondary data analysis to create profiles of combinations of functional limitations to help with accessibility planning; they suggested that it was important to consider these combinations of difficulties in order to get a truer picture of person-environment fit. Finally, Cvitkovich and Wister (2001) and Phillips et al. (2010) compared

person-environment fit theories to see which one was the best predictor of well-being among their samples of older people. Phillips and colleagues (2010) found the congruence model was the best predictor of well-being, whereas Cvitkovich and Wister's (2001) evidence supported a congruence model that accounted for the priorities of older people.

Other studies used person-environment theory to explain difficulties experienced by older people or to improve practice. Iwarsson's (2005) longitudinal study using interviews and observations with older people suggested that the environment remained relatively stable over time, but barriers to the environment increased. This suggests that changes in the 'person' elements, such as poor health or decreased mobility, were creating the person-environment fit difficulties. This is supported by a later study conducted by Iwarsson and her colleagues (2009). This secondary analysis of longitudinal data from Sweden, Germany, and Latvia found that older people who fall have the same environmental barriers as those who do not fall, again suggesting that person competencies need to be considered alongside environmental barriers. Focusing on the outcome of well-being, Werngren-Elgström and colleagues' (2009) qualitative, longitudinal study discovered that person-environment fit problems impacted negatively on well-being early in the ageing process. This is an interesting finding as it suggests that the higher order needs of some older people are likely to be compromised in early 'older age', potentially having an impact on life satisfaction throughout older age. Both Pomeroy and colleagues (2011) and Port and colleagues (2005) concentrated on older people in residential settings. Pomeroy et al. (2011) found that person-environment fit increased the activity levels of the older person and their independent functioning. Port and colleagues (2005) conducted telephone interviews with family caregivers of people with dementia in residential settings and identified the role that family had in mitigating the negative effects of poor person-environment fit. This is a noteworthy finding as it suggests that negative outcomes of a lack of person-environment fit can be altered.

The theory of person-environment fit is related to other concepts used to describe the environment, and the interactions of people within it. These linked

theories can also be seen to link with the areas in which person-environment fit operates (see Table 2.1 A summary table of Cvitkovich and Wister's (2001) explanation of the areas in which person-environment fit operates). The concepts of accessibility and usability also denote the intersection of the person and their environment, but approach this from different perspectives.

2.1.2 Accessibility, usability and the case example of walkability

The term accessibility is generally seen as an objective measure, used in accordance with guidelines, and is not about the individual (Iwarsson and Ståhl, 2003). For example, the Department for Transport used quantitative approaches and techniques to develop their accessibility policies for public transport, in order to meet the requirements of the Equality Act 2010 (DfT, 2012). From this viewpoint, accessibility lends itself to the competence model of person-environment fit as the environment and individual are explored separately. In contrast, usability takes an individual's perspective of accessibility (Iwarsson and Ståhl, 2003) and could be linked to the congruence model as the individual nature of the environment is stressed. Both of these concepts are changeable in nature, which can be problematic for measurement and assessing outcomes. One area where there has been considerable debate, relevant to access to services, is walkability.

'Walkability' is an umbrella term used to refer to the accessibility and usability of an environment for travel by foot. The area is of international interest, with research from Sweden (Wennberg et al., 2010; Wennberg et al., 2009; Ståhl et al., 2008), the UK (Panter and Jones, 2008; Walford et al., 2011) and the US (King et al., 2011; Cutts et al., 2009). Some empirical research on walkability addresses broad issues and are discussed at a population level, whereas other research concentrates on the impact on older people (see King et al., 2011; Wennberg et al., 2010; Wennberg et al., 2009; Ståhl et al., 2008). This provides some evidence to suggest that walkability is an important issue to explore, both for the population as a whole and for specific sub-groups. The Swedish literature is crucial to this project as it is high quality, robust, mixed methods research with a focus on older people, making it both relevant and reliable.

There are several reasons, highlighted in the literature, why walkability is an important area of study. Firstly, it is an area of increased interest to government and international organisations to improve accessibility for all, and with a particular focus on disabled and older people (Wennberg et al., 2010). On a practical level, walking is a common mode of travel amongst older people (Wennberg et al., 2009) and there are safety motivations to making areas more accessible for pedestrians (Wennberg et al., 2009). Walkability has the potential to reduce accidents and falls, which is particularly important for people who are at risk, such as older people. In addition, there is evidence to suggest that walking, as a form of physical activity, links to good health, reduced likelihood of developing impairments and a reduced risk of obesity (King et al., 2011; Cutts et al., 2009). Although not explicitly stated in these reasons for the importance of walkability, it is implied that having a walkable environment could link to increases in mobility, independence and access to services through encouraging walking both as a form of exercise and transport. It is, therefore, clear that the walkability of an area is important, however it is unclear how this should be assessed.

The Swedish walkability literature suggests an ongoing accessibility versus usability debate. The concepts are linked to the viewpoint being considered; 'usability is subjective referring to a person's perception of a certain environment, while accessibility is objective, measurable and relating to societal norms and legislation' (Wennberg et al., 2010: 464). This quote implies that accessibility is viewed differently by government and society and by the individual, with the government perspective being 'accessibility' and the individual's perspective being 'usability'. Whilst accessibility is fairly easily measurable, usability is more complicated due to its variable and individual nature. (Wennberg et al., 2010; Wennberg et al., 2009). The accessibility versus usability debate links to the theory of person-environment, but seemingly with different emphasis being placed on the component elements. It appears that accessibility values the more static environment considerations, whereas usability seems to be akin with the person elements and the high variability this brings.

The literature identifies potential barriers to walkability and these can be categorised according to whether they link with the person or the environment. Linking to the person elements, the individual's own, subjective assessment of the walkability of an area can be an important predictor of behaviour (Panter and Jones, 2008). More specifically, the literature highlights the impact of feelings of safety and security on self-assessments of walkability (Wennberg et al., 2010; Cutts et al., 2009; Foster et al., 2004). Wennberg and colleagues' (2010) mixed methods study with older people, found that concerns over the safety of an area could restrict walking. In addition, Foster and colleagues' (2004) survey of 16-74 year olds both found that women were more likely to consider safety as a factor affecting walking than men. The findings of these two studies, taken together, could suggest that older people and women may alter their walking behaviour due to concerns over their safety. It is possible that these fears over personal safety could be a contributing factor to explain why lighting was found, in a mixed methods study, to be important for increasing walkability for older people (Wennberg et al., 2009).

Further barriers to walkability link with the environment and accessibility more generally, such as the need for pavements to be in good condition (Wennberg et al., 2010). In addition, the availability of benches has been highlighted as important in some mixed methods studies with older people (Wennberg et al., 2009; Ståhl et al., 2008). Benches were seen to be particularly important amongst the 'oldest old' (Wennberg et al., 2009) and those who needed to make regular stops on journeys due to walking difficulties (Ståhl et al., 2008). This suggests that older people can be particularly vulnerable to the effects of an area being of poor walkability.

In the UK, older people's charities have highlighted the importance of available public toilets for walkability, in the context of this facility being in decline (Help the Aged, 2007b; DCLG, 2008a). This service loss is being felt by the public, with the Help the Aged (2007b) survey of 1000 older people finding that, '80 per cent of respondent do not find it easy to find a public toilet' (p. 2). This is a particular concern as the lack of public toilets was found by Help the Aged (2007b) to have limited the movements of around half of their respondents (see

also DCLG, 2008a; Geoghegan, 2005). The provision of public toilets, and walkability more general, is not viewed to be a policy issue for the UK.

By contrast, in Sweden, there have been efforts to tackle the environmental factors linked to poor walkability, with government directives aimed at improving walkability by removing some physical barriers (known as the 'easily removable barriers directives') (see Wennberg et al., 2010). It could be assumed that, once these barriers were removed, walkability would improve in an area; however, research carried out to evaluate these changes found mixed results (Wennberg et al., 2010). This would suggest that policies to improve walkability for older people would benefit from a broader view and the inclusion of 'person' factors.

A different approach to increasing walkability comes from town planning where some planners and researchers have advocated the importance of traditional planning designs. This 'New Urbanist' approach involves designing whole neighbourhoods that are walkable, rather than tackling specific barriers and, in this way, can be seen as a holistic attempt to increase walkability and promote neighbourhood involvement as a result. I now move onto to examine the literature about New Urbanism, lifetime neighbourhoods and 'age-friendly' designs.

2.1.3 New Urbanism, lifetime neighbourhoods and 'age-friendly' designs

New Urbanist planning attempts to replicate traditional planning designs for neighbourhoods; this is 'characterized by higher densities, a diversity of housing types, a concentrated core of retail and employment facilities, a pedestrian-oriented environment, dedicated public and open spaces, and connected street networks' (Lund, 2002: 301). The rationale of returning to traditional planning designs is that a well-designed, walkable neighbourhood will encourage walking behaviour that will then promote interaction between neighbours, enhance the sense of community, and encourage neighbourly behaviours (Lund, 2003; Lund, 2002).

This rationale of New Urbanism does attract criticisms. Firstly, the concept of 'community' is often not defined in the New Urbanist literature making it difficult

to evaluate the success or failure of the theory (Lund, 2002). In addition, the assumptions and rationale of New Urbanism are often not empirically assessed (Wood et al., 2010), leaving a knowledge gap and the potential for incorrect assumptions to go unchallenged. These criticisms suggest that clarity and research are needed to assess the assertions of New Urbanism – this wave of research is already underway, and these studies tend to show broadly positive results about the claims of New Urbanism.

Breaking down the New Urbanism assumptions into their component parts, the existing studies show agreement to various degrees. The assumption that New Urbanist design encourages walking seems to be well founded; Montemurro and colleagues (2011) discovered, through their focus groups with residents of a Canadian city, that the neighbourhood features do mean that residents walk more; this was also found through Lund's (2003) study using survey methods.

The assumption that walking in the neighbourhood increases neighbour interaction and sense of community is also generally well supported. Some research shows that walking increases interactions with neighbours (Montemurro et al., 2011; Lund, 2003) and further survey research suggests that these neighbourhoods have a greater sense of community (Wood et al., 2010; Lund, 2002). There is, however, a caveat to these findings. Wood and colleagues (2010) suggest that it is the type of walking, rather than walking per se, which is important for the link with sense of community. The implication is that going for a walk around the neighbourhood would link to an increased sense of community, whereas walking to the shops would not. This could be because going for a walk, as opposed to walking as transport, could lead to different feelings about 'community' in a neighbourhood. Other research however, outside of the New Urbanist literature, does suggest that going to services (or walking for transport) can have social implications for older people, such as informal meetings with others (see Godfrey et al., 2004). Overall, this suggests the need for a more nuanced approach to a link between walking and neighbourhood interactions.

The final assumption, that interaction with neighbours increases neighbourly behaviour, is not supported by the available literature. One study, using qualitative interviews with older people, implied that walkable neighbourhoods may encourage interaction but not necessarily sustained relationships as neighbourhood characteristics do not help to explain loneliness amongst older people (Moorer and Suumeijer, 2001). More worrying for the theory of New Urbanism, Lund (2003) found that neighbourly behaviour was linked to residents' perception of the walkability of the area regardless of whether the resident actually walked in the neighbourhood. It could be inferred from this finding that neighbourly behaviour is not linked with walking in the neighbourhood, a finding that is at odds with the assumptions of New Urbanism. Overall, the literature provides different levels of support for the assumptions of New Urbanism; it appears that walkable neighbourhoods do encourage walking amongst residents and that this is likely to increase the amount of interaction between neighbours, however this alone does not seem to lead to neighbourly behaviour.

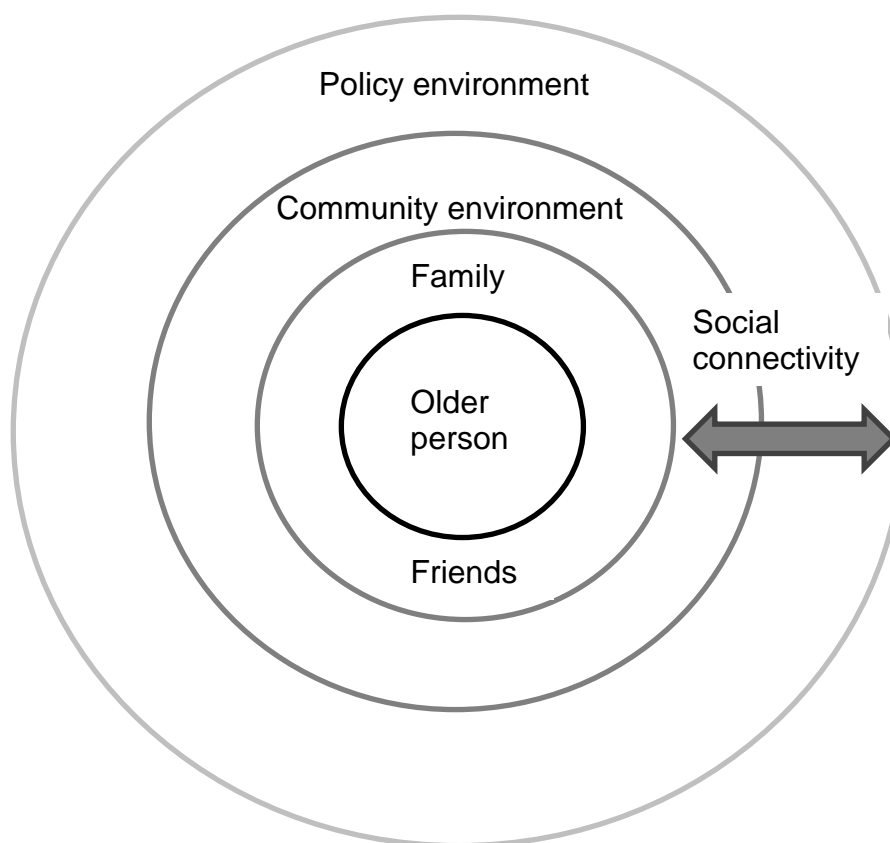
The potential of the core concept of New Urbanism - a walkable neighbourhood with a sense of community - seems to have appealed to policy makers in the UK and internationally. The concepts 'age-friendly' and 'lifetime neighbourhoods' overlap with each other and show some similarities, differences and developments of New Urbanism.

Lifetime neighbourhoods reflect the ideas of New Urbanism in their rationale. The Department for Communities and Local Government (2008b) describe lifetime neighbourhoods as places where 'transport, good shops, green spaces, decent toilets, and benches, are consciously planned for people of all ages and conditions in mind. They promote community spirit and civic pride' (p. 15). This definition suggests that the inclusive design of the neighbourhood will encourage community spirit, a principle of New Urbanism. The literature also identifies one of the key features of lifetime neighbourhoods as their ability to meet the needs of pedestrians; in other words, that the area is walkable (Bevan and Croucher, 2011). It is expected that a neighbourhood designed to be community focused will increase the independence of residents and 'enable

people to develop their social networks and participate as active citizens in their communities' (Bevan and Croucher, 2011: 11; see also Harding, 2007 and Brook Lyndhurst, 2004 for a link between social aspects of a neighbourhood and quality of life).

Lifetime neighbourhoods demonstrate a furthering of the New Urbanist approach by taking a holistic approach to providing the social, physical, and attitudinal environment appropriate for a lifetime neighbourhood (DWP, 2009; Harding, 2007; Lui et al., 2009; Bevan and Croucher, 2011). Menec and colleagues (2011) have produced a model that shows the importance of a holistic approach to lifetime neighbourhoods and the relationship between the individual and their environment (see figure 2.2).

Figure 2.2 Model conceptualising age-friendly communities



Source: Menec et al., 2011: 484

This model shows the older person, embedded in their social network, interacting with their environment, which is part of the broader policy context.

The holistic nature of lifetime neighbourhoods can present a challenge as the neighbourhood would need to suit the requirements of diverse groups of residents (Bevan and Croucher, 2011). Further challenges for lifetime neighbourhoods link to service change; service change away from the local compromises the aims of lifetime neighbourhoods (Kohler, 2007) meaning that careful consideration is needed of the consequences of allowing new developments (Harding, 2007). This suggests that the services in lifetime neighbourhoods need to be protected so that residents can live comfortably in their area and access essential services.

Whilst there are similarities between lifetime neighbourhoods and New Urbanism, and some developments for creating the right environment for the community, there are also differences between the two concepts. A key feature of lifetime neighbourhoods is resident empowerment and involvement in designing and maintaining their neighbourhoods (Bevan and Croucher, 2011; Harding, 2007). This fits with broader policy goals to encourage neighbourhood level planning by residents, backed by new rights (DCLG, 2012).

One limitation of the New Urbanist and lifetime neighbourhood approaches is their assumption of urban ageing. Keating and colleagues (2013) have extended the age-friendly model to rural areas, highlighting the potential of the concept in rural neighbourhoods if the role of the community is considered. The high degree of diversity, of both older people and rural communities, demands a flexible approach to building neighbourhoods that meet the needs of older people (Keating et al., 2013). The suggestion seems to be that lifetime rural neighbourhoods are best conceptualised where the community is seen as integral, diversity is accommodated and the model is responsive to changing circumstances (Keating et al., 2013).

New Urbanist, lifetime neighbourhoods and age-friendly designs link with the environment components of person-environment fit; all aim to provide an

environment that meets the needs of older people. In lifetime and age friendly communities, older people can play an active role in shaping the future of their neighbourhoods. Altering the environment can be one way to achieve better 'fit' for older people to increase well-being. Alternatively (or in addition), older people can enhance the person components through supportive relationships, which is now discussed.

2.1.4 Networks and support

The idea of networks is that 'individuals move through their lifetimes surrounded by people who are close and important to them and who have a critical influence on their life and well-being' (Antonucci and Akiyama, 1995: 356). This, however, is only one example of how networks are explained, with the literature using terms to describe networks interchangeably and/or to describe a person's participation in more than one network at a time.

The term 'social network' seems to be used to discuss all the social contacts that a person has (see Drennan, 2008; and Berkman, 1984 for uses of this term). Narrowing the view of social networks and focusing on the group of people who provide support, some authors refer to the term 'informal support networks' (Bigby, 2008; Dunér and Nordström, 2007; Keating et al., 2003), whilst others use 'support networks' (Berkman, 1984; Drennan, 2008) to denote the same concept. Support networks are a distinct subset of social networks in the literature; they have different functions and roles and are usually a more select group from the broader social network (see Berkman, 1984 for a discussion of this distinction).

Focusing the view of networks further, some authors refer to 'care networks' (Dunér and Nordström, 2007; Keating et al., 2003). The main difference between a 'support network' and a 'care network' is the reason behind the support, in other words, whether the support given in order to provide social care (Keating et al., 2003). The current use of terms and concepts in the literature causes some confusion as different terms are used for a similar definition and different terms are used within the same study. However, the

discussion of social, support and care networks are generally similar within, and distinct between, each term.

The size of networks has a complex relationship with increasing age. The perceived wisdom is that the overall size may decrease, due to the death of some network members. However, primary research suggests that networks can grow to meet the expanding needs of the individual (Dunér and Nordström, 2007; Wenger, 1996). Wenger (1996) also considered that the overall size of the network could be linked to the amount of support available, with larger networks offering greater levels of support. Dunér and Nordström (2007) found that the distance between network members and the individual affected the level of support received. Concern regarding this may be mitigated by research conducted twenty years apart, both suggest that older people's networks are predominantly geographically close (Drennan, 2008; Antonucci and Akiyama, 1987). The linking of support to network size and distance seems to follow logic as instrumental, caring support can only be offered on a regular basis from network members who are close by, and the overall size of a network increases the chances of this being the case. On the other hand, Wellman and Wortley (1990) find that networks tend to be sparse, but are still able to be supportive across different domains, such as offering emotional support or help with household tasks.

Whilst the overall size of the network may increase the potential for support, the literature suggests that support is offered by, and accepted from, only a select sub-group of the social network. Most of the research shows that a mix of relatives, friends and neighbours make up the support networks of older people (Antonucci et al., 2004; Drennan, 2008; Dunér and Nordström, 2007; Keating et al., 2003; Phillipson et al., 2001; Nocon and Pearson, 2000), but the balance and support from each group differs. For some, friends and neighbours can be a significant part of a support network (Drennan, 2008), especially for those who never married (Phillipson et al., 2001). However, both Wenger (1996) and Antonucci et al (2004), through secondary data in the first study and a survey comparison of America and Japan in the second, suggest that older people have networks that consist of family members. In these networks, Phillipson and

colleagues (2001), through using case studies of different community types and family support, suggest that the support role falls to the immediate family and, crucially, the daughter. This is a finding supported by Qureshi and Walker's (1989) study based on interviews with older people (75 and over) and carers, where kin and female kin were found to be the most likely source of support for older people.

Whilst kin-dominated networks are suggested to be common, they may not provide the best support, as other research suggests that the greatest levels and range of support come from networks made up of both relatives and friends (Keating et al., 2003). Nocon and Pearson (2000) noted, as a result of their exploratory study interviewing older people, friends and neighbours, that the types and amount of support offered from friends and neighbours was different from that of kin. This difference in support could be partly due to a difference in motivation to offer it; 'Duty, obligation and responsibility are the defining marks of the special character of kinship and are present in these relationships in a way not replicated even with close friends' (Finch, 1989: 212). This could manifest itself in differences in expectations over the role of friends and relatives in the networks; 'Friendship interactions seem to be dictated by the requirement of pleasure whereas family interactions involve daily needs and routine tasks' (Antonucci and Akiyama, 1995: 361).

In light of changes to families, the dominance of kin in older people's support networks creates some concerns about whether relatives can be relied upon to provide support. Keating and colleagues suggest that:

'Changes in family configuration, such as fewer children, high divorce rates, geographical mobility, and the competing demands of employment and other care-giving responsibilities, are advanced as the reasons why such networks cannot take on increased responsibilities for the care of frail relatives' (Keating et al., 2003: 116).

However, this concern about the family being able to take full responsibility for care is not new. Walker stated in 1985 that:

‘There are worrying signs in the UK that current policies for privatisation and greater use of informal carers are not based on a responsible assessment of needs and resources but a dual concern to reduce the financial cost and limit the scope of social services’ (Walker, 1985: 50).

These fears about changing families unable to cope with the pressures of providing increasing care are clearly enduring, probably aided by the rhetoric of the ‘mythical “golden age” of family said to precede the welfare state’ (Walker 1985: 51). However, even with diverse family structures and expectations, ‘family’ still appears to mean something special; ‘Despite this greater emphasis on choice, it is worth recognising that most generational family relationships do involve a continuing commitment and solidarity, even though this is expressed in diverse ways’ (Chambers et al., 2009: 11). The suggestion here is that there is a difference of opinion in how family members should show their commitment to each other. This is an idea supported by the previous work of Finch and Mason (1993) who found that there was no standardised sense of family responsibilities across Britain. Overall, it could be suggested that diverse family circumstances result in diverse actions, rather than no action and with the issue of who should care being negotiable rather than fixed.

Social networks, regardless of their composition, provide benefits and protecting factors for the individual. Social research has found a wealth of results showing the positive impact on the health and well-being of people imbedded in networks. Networks and support can help to boost self-esteem (Rook, 1990), reduce feelings of loneliness (van Tilburg, 1985), have a positive impact on well-being (Kutuk et al., 2011), boost health (Berkman, 2000), provide a buffer to tough times (Antonucci and Akiyama, 1987) and may help an older person to remain autonomous (Dunér and Nordström, 2007). The impact of networks on health is remarkable, if not fully explained (see Berkman, 1984 for a discussion of this). It is thought that social contact can help protect the health of older people and reduce mortality from a range of diseases (Berkman, 2000). Berkman and Glass (2000) have developed a theory to try to explain how networks can influence the health of individuals. They suggest four mechanisms of influence: ‘(1) provision of social support, (2) social influence, (3) social

engagement and attachment, and (4) access to resources and material goods' (Berkman and Glass, 2000: 144).

Networks can offer a wide range of support. Broadly, this falls into the categories of 'instrumental support, emotional support and befriending' (Drennan et al., 2008: 241, see Nocon and Pearson, 2000 for a similar list). Crucially, for this project, these support areas cover practical support such as giving a lift to someone without a car (Gray et al., 2006). The category of instrumental support, or practical help, may thus mitigate the effects of service change for older people, for example, by being able to ask someone to collect a prescription or take someone to the supermarket. The role of non-kin may be particularly important in providing instrumental support for older people living in the community. LaPierre and Keating (2013) found in a study of non-kin caring, utilising a Canadian survey, that neighbours and friends were a proximate source of predominantly practical support.

So far, the focus of the network theories and research suggests that older people are at the centre of a network simply receiving support from others, but this does not reflect the feelings and practices of older people themselves or, indeed, the evidence. Reciprocity is seen as a fundamental basis of any network, even for those at the centre of caring networks (Dunér and Nordström, 2007). For care networks, reciprocity 'made it easier for older people to ask for help' (Dunér and Nordström, 2007: 81) and having an existing reciprocal relationship with someone makes it more likely that they will become part of your care network (Keating et al., 2003). The type of ongoing support offered by older people to others was subject to change over time, with increasing age. Older people 'continue to see themselves as playing a supportive role to friends and family, notably in areas such as confiding and providing different forms of advice' (Phillipson et al., 2001: 132).

Antonucci and Jackson (1990) provide a theory to explain reciprocity from a lifetime perspective, called the 'Support Bank' where favours given can be stored up and called upon at a later time. They argue that a long-term approach to reciprocity 'can help an individual cope with the declining resources often

associated with aging' (Antonucci and Jackson, 1990: 181). This theory, and the points made above, demonstrates the importance of remaining an active member of a network in older age as this could help to reduce any feelings of dependency as a result of receiving the support of others, as this is offset by providing support in other ways.

2.2 Part two: Rurality, service change and access

Rural areas present older people with some unique challenges to their environment, which could place extra pressure on their 'person' factors and affect their overall fit. In this second part of the chapter, the concept of rurality is discussed and challenges explained, before moving to explore rural service change and access issues that might have an effect on older people living in the community.

2.2.1 Rurality

The concept of 'rural' and its definition is a topic of ongoing debate with two schools of thought; the sociospatial and the sociocultural (Keating and Phillips, 2008). The sociospatial approach uses geographic statistics as a basis for definition and, depending on the data available, can define either areas or individual places as 'rural' or not. In terms of classifying places, the common approach is to use a cut-off of 10,000 residents (Bibby et al., 2005). According to this definition, approximately 18 per cent of the English population resides in a rural area (Defra, 2013a). Where data are available at broader geographical levels, such as constituencies and local authorities, a classification is assigned based on the proportion of rural settlements. Where more than one quarter of the population lives in a rural area, then the local authority is considered rural (Defra, 2009); for parliamentary constituencies, the level is slightly higher at one third (Defra, 2007). For both local authorities and parliamentary constituencies, these levels mark entry onto a more detailed scale of rurality for output area levels down to ward levels (Defra, 2009; Defra, 2007). This suggests that, even though a sociospatial approach could be objective, there are varying definitions dependent on available data and choice.

As an alternative to geography-based definitions, the sociocultural approach focuses on cultural perspectives of what rural means. As such, the outcomes of this approach are 'less tangible than descriptive/geographic definitions, focusing on rural as a reflection of a set of attitudes, behaviours and beliefs' (Keating and Phillips, 2008: 2). It could be seen how these two approaches could define different places as rural, or could be used together to enhance the definition of an area as rural by both cultural and geographic verification.

Alongside these broad schools of thought, there are also international differences over definitions of the term 'rural'. In particular, the literature highlights that there is a different meaning for England, compared to other countries, as 'most rural areas are not actually remote from urban centres and many do not have sparse populations' (Manthorpe et al., 2008: 466). Whilst this disparity needs to be taken into account, there could be a danger in overstating these differences, or dismissing international literature, as some similar issues and debates are raised.

These definitions of 'rural' and general trends can mask the diversity associated with rural living, both within a rural population and between rural populations (Age Concern and Help the Aged, 2005). For example, Farmer and her colleagues (2005) found that residents of Scottish rural areas were particularly satisfied with their health services, even though there was evidence that they were disadvantaged in access to these services based on where they lived. This finding suggests that expectations of what services can offer may differ between residents of rural and urban areas. For research focusing on older people, these diversities in rural areas combine with the heterogeneity amongst 'older people' (Eales et al., 2008). Having at least two layers of diversity could compromise the value of this area of study. Manthorpe and her colleagues (2008) concluded, from their mixed qualitative methods research with older people in rural areas, that "rural" may not be a useful overarching category for analysing service provision or elderly people's needs, with the probable exception of concerns about transport' (p. 466).

Despite this, there are general trends and concerns that affect service provision in rural areas when compared to urban areas, which could provide a basis for thinking about common needs.

The literature suggests that rural areas tend to fall foul of the policy challenges of delivering services in these areas. These challenges centre on cost. It is more expensive to provide services in relatively sparse, rural areas (Dwyer and Hardill, 2011; Rural Services Network, 2011; Age Concern and Help the Aged, 2005). This is compounded by an imbalance of grant funding, with funds allocated by central government away from rural areas (Rural Services Network, 2011). There is also evidence of different approaches in providing services in rural, as opposed to urban, areas.

In addition, outcomes may be similar across rural areas, but for a variety of reasons. Accent Scotland and Mauthner's (2006) research into service quality and accessibility in rural Scotland used focus groups with rural residents across 22 rural areas in Scotland; they found that participants had similar concerns, despite area differences. The study highlighted that communities prioritised similar services for improvement (including public transport, post offices and retail facilities) and had similar concerns about these services. The authors noted that the agreement between communities and areas about service problems were reached via a range of different reasons that were more area-specific (Accent Scotland and Mauthner, 2006). This suggests that there may be some common issues regarding services, despite the diversity of rurality.

Where public services are concerned, the policy of 'rural proofing' covers the decisions made about provision. The Department for Environment, Food and Rural Affairs (Defra) acknowledges that the impact of service change may be different between rural and urban areas and encourages government departments to consider rural areas when designing their policies (see Atterton, 2008). Whilst the policy of rural proofing dates back to 2000, and has undergone restructuring to its monitoring body and some rebranding, it still upholds the same principle of requiring government departments to think about the impact of their new policies on rural areas (Atterton, 2008; Defra, 2012;

Cameron, 2015). Rural proofing is currently one of a set of policies under the umbrella title of 'Making sure government policies and programmes benefit rural businesses and communities' aimed at addressing the equity of changes (Defra, 2013b).

Atterton's (2008) review of rural proofing highlights the confusion over when, how and by whom policies should be rural proofed and limited evidence of the successful application of rural proofing considerations. Worryingly, it appears that these concerns persist. A recent independent review of rural proofing, led by Lord Cameron (2015) demonstrated that some departments are still not fulfilling the requirements of the policy. The review found that around half of the impact assessments for new policies, across different government departments, did not demonstrate rural proofing considerations (Cameron, 2015). Further, some departments showed little engagement with rural proofing issues, instead viewing rural proofing as a 'box ticking' exercise (Cameron, 2015). There was also found to be a lack of appropriate cross-departmental working on common rural proofing concerns (Cameron, 2015). Overall, this suggests that rural proofing may not be reaching the policy aims in some departments, something that may be a longstanding issue.

Crucially, rural proofing does not mean that urban and rural service provision should be the same, but that they should meet the needs of the local people (Defra, 2012). This suggests an underlying assumption that different forms of service delivery are equivalent and that the changes will not have a detrimental impact (see Defra, 2012). However, Defra's own rural statement (2012) highlights that it is vulnerable rural residents, including older people, who are likely to feel the greatest effect of change. Rural proofing also fails to acknowledge that rural services can fulfil additional roles that contribute to their local community. Atterton (2008) highlights the arguments around demonstrating the value of rural areas, therefore making them deserving of consideration in policymaking, as opposed to 'rural proofing being seen as special pleading' (p. 11).

2.2.2 Service change

A common theme throughout discussions of rural living is the notion of service change. There appears to be a consensus that rural areas have a comparative lack of services compounded by a continuing loss of services (Scharf and Bartlam, 2008; Joseph and Cloutier-Fisher, 2005). This loss of services has been hypothesised to affect the supportive potential of rural communities towards older people (Eales et al., 2008) and affect the rate of newcomers entering rural areas (Farmer et al., 2005). Concerns about lack and loss of services run alongside discussions of the centralisation of services away from rural areas, which is thought to have a particular impact on older people. Research by Joseph and Cloutier-Fisher (2005) about ageing in rural areas, found that:

‘Older people are caught in a ‘squeeze’ of sorts. The coincidence of local service depletion and increasing demands for mobility imposes a double penalty on the elderly; they have lost the (probably limited) services once available locally but may be unable to access with ease (possibly superior) services made available elsewhere’ (Joseph and Cloutier-Fisher, 2005: 141; see also Manthorpe et al., 2008; and Scharf and Bartlam, 2008 for a similar discussion).

This emphasises the rhetoric of a double disadvantage for older people in rural areas.

Further to discussions of service reorganisation affecting older people’s access, service change can also have a social impact. Previous studies have highlighted that rural services can become an important setting for social interaction for older people (Gray et al., 2006; Dobbs and Strain, 2008; Dwyer and Hardill, 2011; McAnulty and Brown, 2011; Ward et al., 2013). Further, the studies from Dobbs and Strain (2008) and Dwyer and Hardill (2011) show concern that the combination of limited transport and service loss could diminish the availability of local shops and services that support social activity for some people in rural communities. From the perspective of rural business, Bosworth

(2012) emphasises the community focus, noting personal customer service and a sense of social conscience. It is implied that the bond between communities and their rural businesses is highly valued and fiercely defended in the face of closure (Bosworth, 2012; Burrows and Griffiths, 2010; McAnulty and Brown, 2011; Woods, 2006).

The centralisation of services can occur gradually or as a result of a coordinated programme and in conjunction with alternative forms of service delivery. Case examples of food shops, banks and Post Offices demonstrate each of these approaches. With banks, centralisation appears to result from changes in access to services traditionally carried out in branches; customers are choosing to use digital technology to access banking facilities (BBC, 2014a; BBC, 2014b). For food shops, both the provision and position have undergone significant changes:

‘Since the 1950s food retailing has experienced a major decline in independent and specialist retailers and an increase in the number of multiple retailers operating from numerous locations in a variety of store formats’ (Meneely et al., 2009: 459).

Linked to changes in the physical provision of food shops, there has also been the growth of food shopping on the Internet, although this is often not utilised by older people (see Meneely et al., 2009). In addition to changes in the way food shops are provided, there have also been changes to where they operate from, with a trend for food shops to move to out-of-town sites (Wilson et al., 2004). One advantage to out-of-town sites is the space they afford which could be a reason for the trend to increase the range of services available from one site. This was found to be a beneficial feature for older people in Meneely and colleagues’ (2009) mixed methods study, using focus groups to form the basis of an exploratory survey (791 survey participants), of older people in Northern Ireland:

‘Food stores now offer post office facilities, banking services, cafes, clothing outlets and sell electrical and domestic goods. This expansion is

considered beneficial by older shoppers who enjoy browsing other departments' in-store and appreciate the convenience of being able to purchase all they want within one shop' (Meneely et al., 2009: 464).

Not all of the changes, however, create a positive experience for older people. The rise of out-of-town sites can lead to problems with transport to reach the stores (Meneely et al., 2009; Wilson et al., 2004). This means that some older people have to make multiple bus trips to get to food shops (Wilson et al., 2004) or rely on social and support networks to help with travel, or to go shopping on their behalf (Meneely et al., 2009; Wylie et al., 1999). The importance of networks on food shopping was also highlighted in Wilson and colleagues' (2004) mixed methods study (including focus groups and questionnaires) with older people, where shopping with another person was seen as a solution to access problems, allowed for social interaction and helped with any heavy lifting. It could, therefore, be seen that food shopping creates some difficulties for older people and that using the networks available to them is a coping strategy (see the section on networks and support). These difficulties could lead to the relative disadvantage of older shoppers (Meneely et al., 2009) or impact on diet and nutrition (Wilson et al., 2004; Wylie, 1999).

As suggested previously, food shopping can create opportunities for social interaction (Meneely et al., 2009; Wilson et al., 2004). It was, however, noted in Wilson and colleagues' (2004) study that this was seen by some older people as lacking by comparison to a previous shopping era: 'Several respondents stated that they missed the social environment provided by local, independent stores that had since closed in their area' (p. 117).

Overall, it seems that the extensive changes to food shop provision and position has a varied impact on older people. For those who can access them, large food stores can offer a wide range of services from one site and provide opportunities for social interaction. This, however, is not the case for all older people who may struggle to get to the stores, be unable to take advantage on Internet shopping, and are reliant on the help of others for shopping.

With the Post Office, two programmes of closures exacerbated long-term dwindling of services (The British Postal Museum and Archive, 2012). The motivation for these coordinated closures was a reduction in revenue. For example, traditional Post Office services are now accessible via alternative means, such as government services moving online, resulting in fewer customer visits (BIS, 2010). The 2003-5 Urban Closure Programme (as part of a broader Network Reinvention Programme), resulted in the closure of over 2,400 post offices classified as being part of the urban network across the UK (Post Office FOI response, 2012). The 2005-9 Network Change Programme involved the closure of roughly 2,500 urban and rural post offices (Post Office FOI response, 2012).

A rural subsidy from the government shelters post office provision in rural areas; by offsetting the unprofitability of some rural post offices due to increased cost of service provision (BIS, 2010). The subsidy appears to support continued rural Post Office provision on the basis that there is a social role to the service and it may be the only (or twinned with the only) business left in a community (BIS, 2010).

Popular fears at the time of the Network Change Programme, that rural areas were being unfairly targeted by change, is not completely backed by the existing research. Langford and Higgs' (2010) study into the impact on accessibility of the programme in Wales suggests that rural areas experienced greater numbers of traditional branch closures and had the greatest increase in distance to the nearest, alternative branch. However, urban residents had the greatest loss of choice of branches (Langford and Higgs, 2010). This research challenged the assumption that rural areas felt the greatest impact of the Network Closure Programme, but highlighted that rural and urban areas might have experienced impact differently. Later research by Higgs and Langford (2013) suggested areas of Wales with higher proportions of older residents did not experience an unfair number of Post Office closures.

In light of Post Office closures, there were concerns about the impact on older people. Older people are recognised as being a key customer group for the

Post Office (BIS, 2010). As such, Consumer Focus (the successor to Postwatch), suggest that older people are one of the groups who may be most negatively affected by Post Office restructuring (see Burrows and Griffiths, 2010; McNulty and Brown, 2011; Richards, 2011). Help the Aged (2004) used a case study of one urban closure to demonstrate the possible impact of closures on older people, who may struggle with access to alternative branches and identified areas for concern regarding distances (and the walkability of these) to other branches.

In addition to Post Office branch closures, the range of services offered has also decreased, with fears that this could negatively affect older people. Sinclair and colleagues (2006) explored the loss of the Post Office Card Account (POCA), a service that provided an alternative to a bank account. They found (from a survey of 843 older people living in the UK) that the service was well used, especially by those without a nearby, accessible bank (Sinclair et al. 2006). The loss of the POCA was found to make it difficult for older people to ask someone to collect their pension in times of need (such as illness). This meant that some older people were giving their PIN numbers to others so that the pension could be collected (Sinclair et al., 2006). The authors considered that the needs and preferences of older people were being compromised in the government's pursuit of reducing Post Office costs (Sinclair et al., 2006).

Overall, the recent Post Office closures and loss of service options have arguably affected older people, as regular users of the Post Office (BIS, 2010). The changes may go against the preferences of older people and increase pressure on mobility to reach alternative branches.

A linked approach to centralisation as part of service reorganisation is the acceleration of the trend for alternative forms of provision. Both banks and the Post Office have explored delivering services via non-traditional routes, such as using community buildings and mobile services (The Post Office, 2013; BBC, 2012). These alternative service options help to meet accessibility criteria or pledges for residents of rural areas. For example, RBS have expanded their fleet of mobile branches to meet their own pledge not to close their branch if it is

the last bank in town (Milligan, 2014; BBC, 2012). Langford and Higgs' (2010) research into Post Office changes in Wales, found that government criteria for minimum access levels for post offices were met in rural areas only if outreach services (such as vans) were included. This suggests that Outreach services allow the Post Office to meet the required access levels, whilst closing permanent branches in rural areas.

2.2.3 Services for access

As important as examining how service outlets have changes, is exploring how access to services has changed. This section reviews the literature regarding digital access to services, via the internet, and physical access via personal and public transport.

The internet is hailed as a way of accessing services without having to leave home (see Pannor Silver, 2014), potentially solving transport difficulties. However, for older people, the internet remains an under-utilised resource.

The use of the internet by older people is different from that of the population as a whole, in terms of levels of use, types of use and the relative stability of these over time. Dutton and Blank (2011) found, through their survey of 2000 British people, that usage levels had persisted at around 25 to 35 per cent since 2005. Lane Fox (2010) found, through secondary analysis of official data, that this level of use drops to less than 25 per cent for those who are over 75. More recent estimates suggest that the numbers of older people using the internet is increasing; analysis of Ofcom's (2014) surveys suggests that 42 per cent of people aged 65 are internet users.

Whilst more older people may be using the internet, the figures still suggest that the majority of older people do not. Further, of all adults who do not use the internet, older people are the most likely not to intend getting access in the near future (Ofcom, 2013). This group can be split according to those who have never used the Internet (non-users) and those who have been online in the past but have since chosen to stop (ex-users) (see Dutton and Blank, 2011). Alternatively, the group can be delineated by voluntary and involuntary non-use

(this includes ex-users under the previous definition) (see Ofcom, 2013). The main reason for voluntary non-use is a lack of interest and is most prevalent amongst those aged 75 and over, where 22 per cent are voluntary non-users (Ofcom, 2013). Involuntary non-use occurs in 22 per cent of 65 to 74 year olds and 42 per cent of people aged 75 and over, with the main reason being cost (Ofcom, 2013). The reasons for voluntary and involuntary non-use are consistent with the reasons stated by Dutton and Blank (2011) for non-use and ex-use, with the suggestion that these reasons have been stable since 2009. The reason of 'a lack of interest' was also found in other settings (Lane Fox, 2010; Millward, 2003; Selwyn et al., 2003), alongside some concerns about underlying factors for this view. Millward (2003) suggests that a 'lack of interest' could be proposed as a reason for non-use to cover issues around a lack of confidence or skills for using the internet. This could explain why a quarter of non-users have used proxy access to the internet (Ofcom, 2014). Thus, a lack of personal interest may not necessarily mean that there is no need for the internet, which is where proxy access may be useful.

Discussions of use and non-use of the internet include perceptions of differences between groups. There is a suggestion of a divide between older people and other population groups in terms of their digital service access (see Godfrey and Johnson, 2009). In addition, there are differences in the characteristics of older people, which may make internet (non)use more or less likely. Internet use is associated with a higher income (Lane Fox, 2010), particularly having higher socioeconomic status over the lifecourse (Pannor Silver, 2014). Disabled people of any age group are less likely to use the internet (Dutton and Blank, 2011). For older people, increased likelihood of using the internet is associated with being male, married, under 70 years old and having spent longer in education (Selwyn et al., 2003). In addition, there are geographical variations in internet use, with highest concentrations of older people who do not use the internet in rural and coastal areas (Lane Fox, 2010). These factors hint to the digital divide stemming from earlier in the lifecourse, as well as current factors.

Divides also exist in the ways older people use the internet, compared with other age groups. Ofcom's (2014) research suggests that older people are using the internet for a more limited range of activities than the adult population as whole. Half of the sample of people aged 65 and over used the internet for buying things, compared to 66 per cent of all adults in the sample. When it came to banking and paying bills online, 61 per cent of the adults in the sample did this but only 35 per cent of older internet users did. Finally, only 17 per cent of older people online used the internet to access government services, whereas 28 per cent of all adults did.

The more restricted use of the internet of older people suggests that online access may not be a viable alternative to physical access to services. Reasons for narrow uses of the internet amongst older people may be linked to unconfident attitudes towards technology, such as concern over the machinery and its reliability (Dutton and Blank, 2011; see also Gulc and Silversides, 2013). Worryingly for online access to services, older people are more likely than adults as whole to state that concerns over security prevent them from ever paying by credit or debit card online (Ofcom, 2014). Further, 64 per cent of older people in the sample felt that buying things online was a risk to privacy, a sentiment held by 54 per cent of all adults in the sample (Ofcom, 2014).

These findings are in a context of government services becoming 'digital by default'. Promoting online access is projected to save the government between £1.7 and 1.8 billion per year (Cabinet Office, 2012). Whilst other means of accessing government services should remain for those who require them, departments will be encouraged to incentivise digital access or assist digital access (Cabinet Office, 2012). As the least likely age group to use the internet, older people may feel the impact of this approach to digital access particularly strongly. There are hints from an AgeUK commissioned project that some older people attending internet training courses feel that they are being forced online (Gulc and Sivlersides, 2013), although this is not directly attributed to government policy.

Overall, the relatively low numbers of older internet users and slow trend of increase could suggest that predictions for future use of the internet by older people may be over-enthusiastic. Rather than hoping older people will start using the internet, and to its full potential, we should concentrate on trends in older people's physical access.

Having appropriate transport options allows older people to participate and engage in their local communities (see Zeitler and Buys, 2015). The role of the car is particularly important to older people in sparser areas. For older people in these settings, access to a car links to freedom and independence (Help the Aged, 2008; Zeitler and Buys, 2015). Car use is important for travel to essential and recreational services, and to other people (Help the Aged, 2008; Zeitler and Buys, 2015; Ward et al., 2013). Having a car can also help other people in the driver's network, through lift giving, conferring the benefits of car travel to those without access (Zeitler and Buys, 2015).

The studies of car use in rural areas suggest that public transport, where available, is a back-up option (see Gray et al., 2001; Nutley, 2005; Ward et al. 2013). Nutley (2005) highlighted in his longitudinal study of rural Northern Ireland that:

‘Such is the dominance of the motor car in modern society that the roles of public transport and local services are assumed to be merely a safety net for those without access to private vehicles, and the latter can be regarded as ‘transport-poor’ (251).

It is interesting that this statement suggests a cyclical impact of car use on local services; that local services are negatively affected by the dominance of the car for transport (presumably allowing for greater choice of services elsewhere), but that the unsustainability of local services increases the need for car travel.

Whilst car travel in older age can be necessary and beneficial, it can also raise concerns regarding safety. In the UK, older drivers are required to renew their licence at 70 and every three years subsequently (AgeUK, 2012), a practice

that is viewed as discriminatory by a majority of older people in Help the Aged's (2008) study based on a survey of 1,000 older people. Help the Aged (2008) also point out that there is no evidence to suggest that older people are more likely to be in accidents than other age groups (Help the Aged, 2008; see also Berry, 2011). There is, however, an issue over the choice of evidence for this claim, as not being in an accident does not necessarily imply driver safety. The relative safety of older drivers could potentially be linked to drivers altering their motoring behaviour, if this is felt to be necessary; around half of the older people surveyed for Help the Aged (2008) admitted that they had changed their driving behaviour. Ragland and colleagues' (2004) study, using interviews with over 2,000 American people aged over 55, found a wide range of reasons were given for altering driving behaviour, with the most common being concerns over eyesight and other reasons that could be seen to link to a lack of confidence or concerns over safety. This willingness to change could reflect the importance of car travel for older people.

Older people are encouraged and enabled to use public transport in the UK through the concessions offered. The minimum standard in the UK is set at a country level, but can be more generous at the local level (AgeUK, 2012). There has been a recent trend for more generous concessions across the UK. Rye and Mykura (2009) found, through secondary analysis of official data, that in Scotland this increase in generosity has led to an increase in take-up. It also altered the profile of those who choose to take-up the concession: 'these new passholders are younger, wealthier and have more cars than the people who had passes before the more generous concession existed' (Rye and Mykura, 2009: 453).

Transport accessibility is a policy aim in the UK (see DfT, 2010; Farrington, 2007). The Equality Act, 2010 is the basis for government policies in this area, supported by the Public Service Vehicles Accessibility Regulations, 2010 (DfT, 2012). The policy and legislation should mean that service providers consider, and act upon, the needs of all population groups (DfT, 2012). Whilst the needs of older people may not be addressed explicitly or separately from the needs of other groups, accessibility planning will still cover these needs within broader

recommendations (Burnett, 2005). In order to achieve high levels of accessibility, a holistic approach needs to be taken across government departments and sectors (DfT, 2010; Farrington, 2007; Burnett, 2005). This should help to broaden the view of accessibility that it is 'at least as much about people as places' (Farrington 2007: 320). This view links to the theory of person-environment fit, where accessibility is an outcome of the interaction between the abilities of a person and the press of the environment. The equalities legislation should also mean that older people in rural areas are not disadvantaged in comparison to their urban counterparts.

Alongside accessibility aims and concessions, Help the Aged (2007a) found, through their survey of over 12,000 older people, that a wide variety of barriers existed to bus use. Table 2.2 outlines some of the reasons respondents gave for not being able to use the bus as often as they wanted. The participants could choose more than one reason although a significant minority did not state a reason. It is possible that this is because they used the bus as often as they wished, or perhaps overlooked this question.

Table 2.2 Reasons preventing you from using the bus as often as you would like

Reason	Number of times cited
Difficulty in carrying shopping on and off the bus	5,069
Difficulty getting to and waiting at bus stops in bad weather	4,402
Difficulty getting to your seat before the bus moves off	3,158
Difficulty in getting to/from bus stops to home or destination	2,864

The buses do not go at times when you need to travel	2,813
The buses do not go to places you need to go to	2,805
Buses are too unreliable to use	2,729
Anxiety over anti-social behaviour on buses or while waiting for one	2,605
Difficulty in reading or understanding timetables	1,369
Other	578

N.B. 28,392 reasons were cited, 5,373 respondents did not state any reason.

Source: Adapted from Help the Aged, 2007a

Table 2.2 suggests that personal and environmental barriers are more likely to prevent older people from using buses as often as they would like, as opposed to barriers related to the bus service (such as destinations and times). This contrasts with the findings of Gray and colleagues (2001) in their study conducted with adults in rural Scotland, where barriers were often linked to the bus service. They found that:

‘Common problems associated with bus travel included absence of service, lack of frequency of service, length of journey time, cost, lack of service to preferred destinations, and concerns about comfort, space and security’ (Gray et al., 2001: 122).

The contrast could be for two reasons. The Help the Aged (2007a) study surveyed older people, whereas Gray and colleagues (2001) included a wider age range. The older age of the participants in the Help the Aged (2007a) survey could be a reason why person and environment related barriers were more commonly cited. Secondly, the setting of the studies differed; the Help the Aged (2007a) survey used an urban case study, as opposed to the rural focus

of Gray and colleagues (2001). The relative reduced frequency and availability of bus services in rural areas could be a reason why bus service barriers were prioritised in the rural study (Gray et al., 2001).

These apparent interactions between age and/or rurality could reflect a 'horses for courses' approach to public transport, as supported by Nutley (2005) who suggested that the modes of transport used by rural populations reflected distance, choice and availability. More generally, this difference could also suggest that, given the choice, car travel is preferable to bus use (suggested by Gray et al., 2001; Help the Aged, 2008). This, however, should not diminish the importance of bus travel to older people (AgeUK, 2012).

2.3 Discussion

The review of the literature draws upon the research of multiple disciplines and interdisciplinary projects. These areas of study were broadly organised into literature on person-environment fit and related theories and rurality, service change and access. The range of disciplines included provides a wealth of knowledge; however, this can be disparate and uncoordinated between fields of interest, leaving gaps in knowledge and evidence. The fields of literature reviewed here were those deemed relevant at the outset of the research project. The overall research was flexible to finding more areas of linked literature. Fields of literature that emerged as important, as opposed to being hypothesised as relevant, are included in the discussion sections of the empirical chapters and in the overall discussion chapter.

The literature presented on person-environment fit tended to focus on either theory development or explaining outcomes (or behaviours) for older people, predominantly cross-sectionally. By contrast, there was little exploration of the intersection between person and environment factors dynamically, over time. Further, there seemed to be a gap in knowledge regarding fluidity within the person and environment components on outcomes (for example, changes in networks, access to resources or the policy environment). This is particularly important when taking into account the discussions of usability and networks;

usability suggests a more personalised and responsive assessment of environmental accessibility and networks are presented as flexible, rather than static. Therefore, related theory to person-environment fit supports the need to explore the relationship between a person and their environment in a way that allows for dynamism within components and the intersection.

Related to person-environment fit, the theories of New Urbanism, 'age-friendly' and lifetime neighbourhood designs currently focus on the theory in abstract or their application in urban communities. This leaves a gap in knowledge regarding to what extent these theories of environment planning can be transferred to rural communities in the UK.

The evidence in the second section, relating to rurality, service change and access is highly fragmented, with little research overlap between these concepts and ageing. However, one trend was to focus on single everyday services in isolation; this is problematic as the challenges to rural service delivery are not particular to different types of basic service. This approach does not sufficiently acknowledge cumulative change involving multiple services, in response to rural challenges in service provision. Changes across multiple services could have an impact on the environment in which an older person lives, making it a consideration in person-environment fit explorations. Further, the literature included in the review highlighted the relative lack of evidence on the impact of service change or loss in rural areas.

Across the literature review as a whole, there was a distinct lack of relevant policy. The main policy in this area, rural proofing, has been criticised as confused and not meeting its goals. This highlights a need for research in this area to have a policy focus to build an evidence base for future, robust and relevant policies.

Considering the literature reviewed and the gaps identified, this research aims to contribute to the knowledge on ageing and environments of service change, with a policy focus. To address the relatively little evidence on service change in rural areas of England, this research will examine changes multiple services (to

gauge the overall service environment) to assess whether there are urban/rural differences change or loss. Whilst acknowledging that this will relate to physical service locations and not online access, this is still important as the review showed that older people were under-utilising online services.

In addition, this research will take account of the subjective (or person) elements of access, linking with the ideas around usability. The study will examine older people's perceptions of access to services over time, allowing for an exploration of the intersection of person and environment factors in relation to access to services as people age.

Lastly, the research will explore the impact of change on older people living in rural communities (where there is currently a relative lack of evidence). This strand of the study will allow for both objective and subjective assessments of possible impacts. The approaches taken in addressing the research aim and objectives are discussed in detail in the following methodology chapter.

3 Methodology

The existing evidence on rural ageing and on service change uses qualitative, quantitative and mixed methods methodologies. This chapter outlines and explains the methodological approach taken to addressing the crossover of interests between service change and rural ageing, whilst viewing service change in its wider, cumulative, context; the gaps in knowledge identified in the literature review (chapter two).

In identifying relevant literature for inclusion in the review (chapter two), a combination of database and hand searches were used. From these initial searches, priority for inclusion was given to literature that focused on 'everyday' services, older people and had an England, or UK, basis. International studies were included where they were particularly pertinent or seminal and/or where the majority of relevant literature on a topic originated from outside the UK (for example, with walkability). Studies were not included in the review if the focus was on health or social care services, were not available in English or were international in remit (other than in the circumstances outlined previously).

With this in mind, the overall aim of the project was to explore issues pertinent to older people's access to 'everyday' services, with a focus on whether there was a rural dimension. To address this overall aim, three related questions were framed:

- Are there differences in service changes between rural and urban areas?
- Is there a rural/urban dimension to how older people perceive their access to services as they age?
- What is the impact of service change on older people living rural areas?

A mixed methods approach was taken to meet the overall aim of my study and its related research questions. The basis for this decision, and the considerations made, will be explored throughout this chapter.

Firstly, the mixed methods approach and its ontological basis is explained. This is followed by an examination of the research design chosen for addressing the

central research questions and the approach taken to integrating quantitative and qualitative findings. Finally, the considerations of conducting secondary analysis of existing data and case studies are explored.

3.1 Mixed methods

Mixed methods research lacks an agreed definition, especially concerning what is mixed, how and for what purpose. This seems, at least partly, due to the wide range of research that can encompass mixed methods. Johnson and colleagues (2007) sought to create a universal definition through asking leaders in the field for their current definitions, which were then analysed for their commonalities. From this process, Johnson and colleagues (2007) proposed that:

‘Mixed methods research is the type of research in which a researcher or team of researchers combine elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth of understanding and corroboration’ (123).

Whilst mixed methods research has the potential to be interdisciplinary, using innovative combinations of quantitative and qualitative methods, it has been criticised for not doing so. Bryman’s (2006) study of how mixed methods were used, suggested that some disciplines used mixed methods more than others and that the predominant approach was to use a combination of interviews and questionnaires in a cross-sectional design. Hesse-Biber (2010) considers there is a focus on quantitative methods, with qualitative methods used only in a supplementary role. Overall, the common choices of methods in mixed methods projects can be seen as uninspiring (Teddlie and Tashakkori, 2012); however, this is not inherently the case.

The ontological perspective of pragmatism can inform mixed methods; this is a distinct paradigm that allows for the combination of quantitative and qualitative methodologies and worldviews (Teddlie and Tashakkori, 2009). Pragmatists

approach issues as if on an epistemological continuum, rather than from opposition along the qualitative/quantitative divide (Teddle and Tashakkori, 2009; Morgan, 2007). Pragmatism is problem oriented and practical in its approach, concentrating on using suitable and appropriate methods to explore the project's research questions (Creswell and Plano Clark, 2011; Feilzer, 2010; Teddle and Tashakkori, 2009). This perspective advocates a flexible and responsive view to the planning, conduct and analysis of mixed methods research (Feilzer, 2010) and acknowledges the link between the opinions of the researcher and the research process (Morgan, 2007; Tashakkori and Teddle, 1998).

My approach in this project stems from pragmatism, but also encourages the complexity and different perspectives of mixed methods thinking, as discussed by Greene (2005). Greene (2005) advocates mixed methods research as being inherently welcoming of different (and competing) findings; through seeking out complexity in a research problem, the design is enhanced. Crucially for my study, different methods and approaches can be used to answer complementary research questions, with the end goal being a greater awareness, rather than validation, of the issues (Greene, 2005). Taking into account this approach to mixed methods research, I considered this was an appropriate stance from which to explore the research questions of my study. The research questions could be explored using different approaches and methods, without the requirement to reach a single understanding of the overall research aim.

3.1.1 Research design

The mixed methods approach adopted a convergent parallel design; the qualitative and quantitative strands of work are given the same priority and the research is undertaken during the same phase before being combined for an overall interpretation (Creswell and Plano Clark, 2011). This design is suited to this project's research questions as the quantitative and qualitative strands address related issues in the overall phenomenon (Teddle and Tashakkori, 2009). Alternative designs may prioritise one strand of work above another and

these may be conducted in sequence; for example, qualitative interviews could be conducted so that the findings then inform the design of a quantitative survey (see Creswell and Plano Clark, 2011). In the convergent parallel design, and my project, the commencement of one strand is not dependent on the completion of another; as such, they can be undertaken during one 'data collection' phase. In practice, each strand was started at a similar time, with focus swapping between them to make efficient use of time and resources; for example, working on a strand while waiting on training for another. In convergent parallel designs, each strand is analysed separately and according to appropriate techniques (see Creswell and Plano Clark, 2011). Notwithstanding, it is expected that this analysis is carried out by the same researcher and not in a vacuum; the knowledge generated from the analysis of one strand may be incorporated into other strands (see Teddlie and Tashakkori, 2009). For example, in my study, I had already started quantitatively examining service change before the qualitative strand reached the fieldwork stage; the emergent quantitative findings were used as context for informing the development of fieldwork materials such as topic guides.

Guest (2012) has critiqued the use of research design typologies and questioned their usefulness. Instead, the suggestion is to show a diagram of the approach and outline the timing and purpose of integrating different strands (Guest, 2012); see figure 3.1 for a diagram of the approach taken in this study. Bryman (2006) also highlights the need for researchers to be clear about the rationale for a mixed methods approach but also to be flexible, as the outcome might not be the same as planned. Integration in this project occurs at the final stage, after the interpretation of the findings from all the strands of enquiry (this can be called triangulation, meta-inference or interpretive integration). For the purposes of this project, I will call this integration 'meta-inference' and will outline what I include, and exclude in this term and where there is overlap with the other terms.

3.1.2 Integration

Meta-inferences are the conclusions that can be drawn from integrating the interpretations from the findings of the different strands of work. The meta-inferences can be within or between the strands and do not have to reach an agreement (Creswell and Plano Clark, 2011; Teddlie and Tashakkori, 2009). It is an examination of different aspects of the same question into an overall interpretation (see Moran-Ellis et al., 2006 and O’Cathain et al., 2010). This approach to meta-inference overlaps with interpretive integration, which creates an overall coherent account from the strands (see Moran-Ellis et al., 2006). Although I have chosen to call this process meta-inference, it can also be explained by interpretive integration used in the above context.

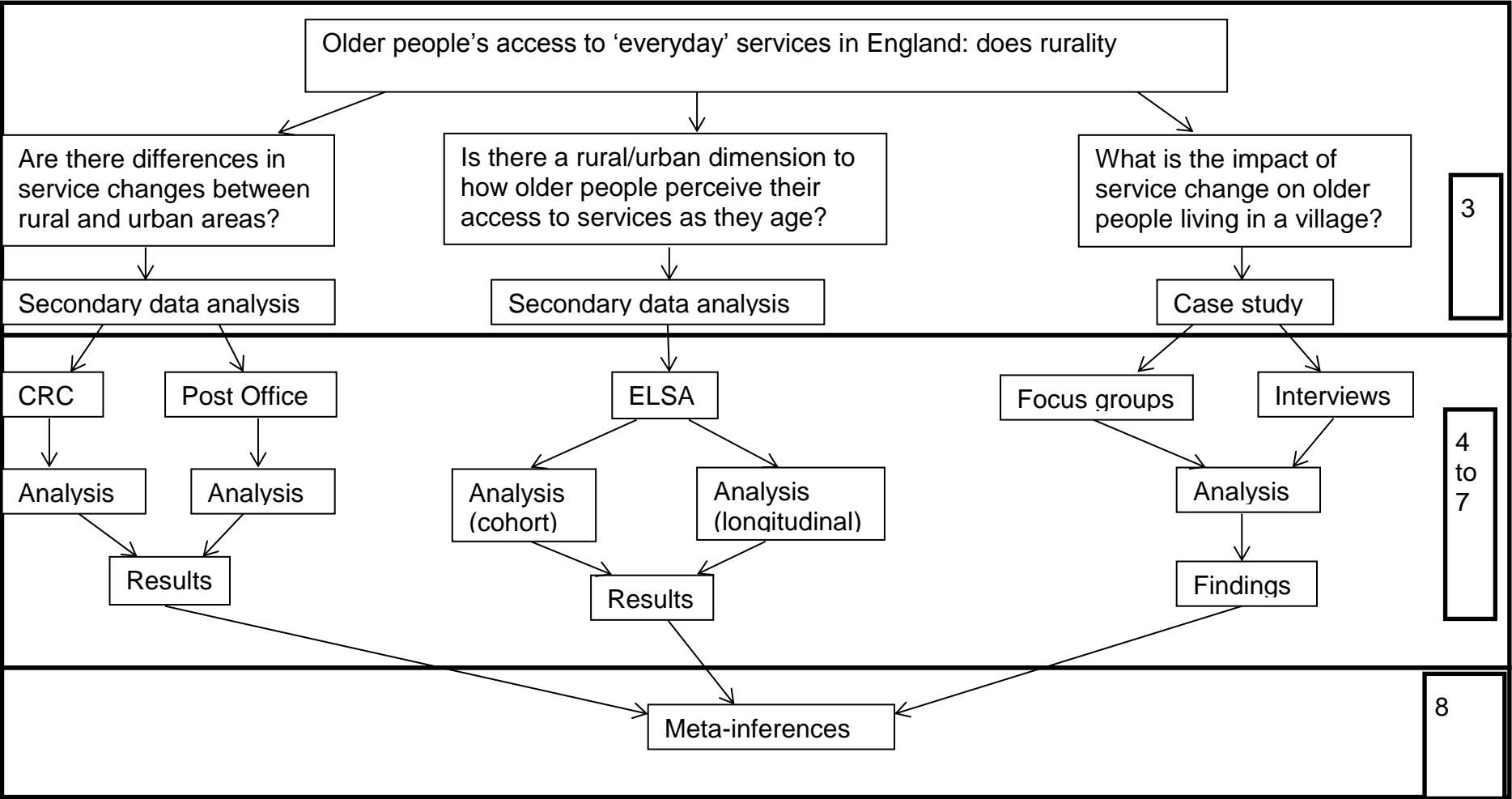
Where the approach used in this project differs from other conceptions of integration is where thoughts turn to validation across strands. In some contexts, integration (such as triangulation) is associated with validity as a quality indicator of the results in different strands (see Farmer et al., 2006; Hesse-Biber, 2010; Teddlie and Tashakkori, 2009); greater agreement across strands is equated with greater levels of validity and quality. Using a triangulation approach for validity is not appropriate for this project as the differences in the data sources mean that the strands are not answering comparable questions (see Farmer et al., 2006). In this project, the different strands are viewed as equally valid and their validity is neither enhanced nor weakened by convergence or divergence in interpretations when they are integrated.

I approached the meta-inference stage of the study in a similar vein to other types of evidence reviews (such as the literature review, chapter two). I re-read the empirical findings and discussions and noted where similar issues or topic had been raised across the strands. I then looked for similarities and differences in the findings and explored the possible reasons behind these; this was not to ‘validate’ one set of findings against another, rather to examine the differences to deepen my understanding of the complexities. The process of meta-inference allowed me to view the empirical findings of the strands critically from

alternative perspectives, strengthen my understanding of the issues and, therefore, enhance the conclusions that were drawn.

Figure 3.1 shows how the strands of work progressed and when they were integrated. The associated chapter numbers indicate where discussions of these stages can be found in the thesis.

Figure 3.1 Research design



3.2 Empirical approaches within convergent parallel design

Whilst a mixed methods approach was taken to address the overall research aim, each strand of work (each research question) utilised either qualitative or quantitative approaches, methods and analytic techniques; none of the research strands contained a mix of quantitative and qualitative approaches.

The first research area – examining whether there are differences in service changes between rural and urban areas – requires the systematic investigation of the types of changes in basic services, chosen as exemplars of change or access problems, over time and taking account of where these occurred. I considered that this was most suited to a quantitative approach that could utilise existing datasets that covered service change across the whole of England. It is possible to generate this information qualitatively, but this would have used more resources in terms of time and expense. The benefits and considerations of using existing, quantitative datasets are outlined in section 3.2.1.

The third research question – exploring the impact of service change on older people living in rural areas – is well suited to a qualitative approach. Whilst quantitative datasets or primary surveys could pose questions about the impact of service change to older rural residents, this approach would be unable to gather in-depth responses. A qualitative approach, focusing on depth of understanding of impact, would also help to address one of the gaps in knowledge identified in the literature review; that service change is not examined holistically, in the context of previous change. The approach chosen, a case study, is discussed in section 3.2.2.

The second research question – examining whether there is a rural/urban dimension to how older perceive their access to services as they age – could have been approached from either a qualitative or a quantitative stance and involves investigating the basis for perceptions over time. A quantitative approach was chosen to be able to cover a longer timeframe for changes in perceptions (the ELSA dataset spanned a decade at the time of analysis),

which could not be achieved through qualitative means in the time allowed for the research.

Mixed methods were therefore necessary to address the related dimensions of the project's research questions from different angles for insight and to examine complexity (see Creswell and Plano Clark, 2011; Mason, 2006). It also allows the project aim to be explored at different levels for similarities and differences, from national trends to individuals' views and opinions (Mason, 2006; Teddlie and Tashakkori, 2009). The two quantitative strands utilised existing datasets, whilst the qualitative strand used a case study approach; the strengths and considerations of these approaches are outlined in the following sections.

3.2.1 Secondary analysis

Secondary data analysis involves examining data that has already been collected, for a different research purpose (Arber, 2001; Dale et al., 1988). For qualitative data, this is sometimes referred to as re-using data (see Bishop, 2007; Irwin and Winterton, 2011; Mason, 2007; Moore, 2007). As with any other research strategy, there are benefits to secondary data analysis and drawbacks (to overcome).

Secondary data sources are an arguably under-utilised resource (Arber, 2001; Smith, 2008); offering potential to research projects for generating original findings from existing data sources. Secondary sources can give access to data that may not be achievable via other means. Secondary analysts can make use of longitudinal, large-scale surveys and administrative datasets that may not suit a project's timeframe or resources otherwise (Arber, 2001; Smith, 2008).

Using existing datasets may also mean that researchers benefit from high quality of data, with expert input, that they may not be able to replicate themselves (Gorard, 2003; Smith, 2008). By using high quality data, researchers can enhance the standard of their project (Gorard, 2003). Secondary analysis can be useful as a complementary approach in a mixed methods project, with a suggestion that this could lead to more valuable, overall

inferences because of the above strengths to the data (Gorard, 2003; Smith, 2008; Dale et al., 1988).

As with any approach, there are areas to consider before using secondary data; these issues are more thoroughly thought through (or at least documented) by secondary users of qualitative data. Although the secondary datasets used in my study are all quantitative, the considerations highlighted by qualitative researchers are still useful and relevant.

By definition, the secondary analyst is removed from the original context of the data collection, leading to necessary considerations about the new use. It is crucial to examine the quality of the data thoroughly through engaging with the available documentation, including its purposes and methodological decisions (Arber, 2001; Gorard, 2003; Irwin, 2013). Dale and colleagues (1998) warn that:

‘while in some kinds of research the subjective elements are readily apparent, in survey-based research they are likely to be hidden from view and can therefore be easily overlooked (16-17).

This would suggest that the subjective aspects of survey data need to be uncovered and explored as part of the research process. Again, this could be achieved through examining accompanying documentation; it is important to understand the background to the data, the way it was collected and the context of its generation.

Beyond the rigour of the data, it is important to consider the context of data at the time of production and its secondary use (Bishop, 2007; Moore, 2007; Dale et al., 1988). Researchers should be wary of secondary analysis where it is assessed that the use of this is being undermined by issues with the original context (Irwin and Winterton, 2011); this could include where a major political event or news story may have temporarily affected attitudes that are being measured, as an example. Whilst this concern primarily relates to the secondary use of qualitative data, the background to the data (and how it was created) is still a consideration in quantitative studies. The original context of the

data remains; data are not neutral and 'carry with them the imprint of how they were generated' (Irwin et al., 2012: 67, see also Moore, 2007; Dale et al., 1988), something that can go unacknowledged in quantitative data production (Dale et al., 1988).

Whilst these considerations are important for secondary data analysis, they are not unique to it; critiquing data sources is part of good research practice that transcends primary, secondary, qualitative and quantitative boundaries (Smith, 2008; Mason, 2007). Other recommendations for secondary researchers are also common principles of research practice. The limitations of the data should be acknowledged in the reporting of the findings, written clearly and further recognised in relation to the findings (Gorard, 2003; see also Dale et al., 1988; Smith, 2008). This links to the research practice of reflexivity, which is important for secondary analysis, as all research (Mason, 2007; Moore, 2007). In the context of secondary analysis, reflexivity involves an open discussion of the considerations of the data and the research process to demonstrate an understanding of how the data has been produced and used (Moore, 2007).

Dale and colleagues (1998) raise some final considerations for research practice that are more targeted at secondary data analysts. They advocate that secondary data researchers have a theoretical backing to their choice of variables in order to reach results that are meaningful. This helps to avoid a pitfall of secondary data analysis; that the findings are useless due to the large amount (and wide range) of variables that are available within a dataset. Dale and colleagues (1998) also warn against viewing secondary analysis as a quick or easy approach, instead highlighting that sensible, meaningful results require the same amount of thought and time as primary methods demand.

3.2.1.1 Alternative approach: primary surveys

The major advantage, for my study, of using a survey designed specifically for it, is the control over the questions asked; a primary survey could ask more questions relating to issues of access for rural older people than are available via secondary datasets. When considering creating a survey designed for the

purpose of the study, the advantage has to be weighed against the disadvantages of the approach and compared to using secondary data.

All of the secondary datasets utilised in my study included an element of time; the data were collected at intervals over several years or at different times of change. This was crucial for answering the research questions and addressing the overall aim of the study. A primary survey (in the context of this research) would not be able to capture change over time; even if it were possible to conduct more than one wave of a primary survey in the timeframe of the project, the total timespan for change would have to be less than four years (and more realistically, less than two years).

As a study undertaken by a single researcher, conducting a primary survey may be inappropriate (or at least not a sensible use of resources). Czaja and Blair (2005) highlight that it is relatively unusual for surveys to be the work of a single researcher as surveys benefit from the input of a team with a range of skills. Using secondary data, a single researcher has the advantage of using a survey that a team of skilled researchers have designed and implemented. In addition, the secondary analyst does not incur the resources necessary for planning, designing, testing and implementing a survey.

The issue of resources is an important consideration. In the context of my project, I do not have the necessary skills to carry out a good quality survey (this would therefore involve paying for training and allocating time to this). In addition, a survey to meet the purpose of my project would require more costly and time consuming means of data collection; web-based surveys are the cheapest and quickest to administer (Czaja and Blair, 2005), however the literature review highlighted that the internet is underused by older people (see section 2.2.3). In contrast, the secondary survey used in my project (the English Longitudinal Study of Ageing) used face-to-face, computer assisted quantitative interviews (Natcen, 2012); the most expensive approach to data collection (Czaja and Blair, 2005). Further, Bourque and Clark (1992) highlight that data processing and management require careful consideration and implies that this is also a time-consuming process, especially if not sufficiently well planned.

Again, in using secondary data, this process is undertaken by the survey team rather than the secondary analyst.

Lastly, there is the consideration of the ethics of carrying out a primary survey when the issue is already addressed (albeit in a limited way) in an existing survey available for secondary use. One of the principles of conducting ethical primary research is to avoid intrusion, including over-burden (SRA, 2003). Whilst one interpretation of this is to not 'ask too much' of an individual who is already taking part, it could also be viewed that unnecessary data collection (because the data already exists) is also burdensome.

3.2.2 Case Study

Case studies allow the utilisation of different forms of information through a range of methods, which can provide a way of investigating complex issues (George and Bennett, 2005; Yin, 2009). As a result of this, case studies contribute to a natural form of learning (through explaining experiences in detail) that can increase the knowledge and experience of the readers, which can also develop theory (see Stake, 2008; Stake, 2000).

The benefits of a case study design are particularly strong when used as a complementary source within a mixed methods approach (George and Bennett, 2005). The strength of case studies is the ability to understand the issue under question in a way that retains the context, complexities and concepts of the real-life setting (Yin, 2009; George and Bennett, 2005). This means that a case study can be used to explore contested concepts, such as independence, which are difficult to reduce to variables (for quantitative data collection and analysis) and benefit from being viewed in a wider context (George and Bennett, 2005).

There is an ongoing debate within the case study literature about whether single or multiple/comparative case study designs are a better approach. It can be implied from the literature that case study research designs can enhance their validity and credibility through investigating more than one case, with some authors favouring this approach (such as, George and Bennett, 2005; Yin, 2009). It appears to be hoped that a multiple case study approach will address

concerns about case studies being unique, chosen for pragmatic reasons, and being insignificant on their own (see Mitchell, 2000; Yin, 2009). This approach, however, fails to take into account the role of case studies as part of mixed methods approaches where single case studies can still have value and a role.

Stake (2008; 2000) argues for the use of single case studies, asserting that there are constant within-case comparisons. The within-case comparisons are an integral part of the research process, achieved through repeatedly checking findings and searching for similar and different interpretations. Further, the case study in my project is part of a wider mixed methods study; the case study findings are interpreted again alongside the quantitative findings from the other strands of work.

Single case studies can demonstrate the rationale for their choice of the case to dispel fears about purely pragmatic decisions. Selecting a case is not a straightforward issue and this decision is crucial as it reflects earlier decisions and affects the rest of the research process (Harper, 1992). The primary criterion for choosing a case site is to achieve the research objectives (George and Bennett, 2005), which may not require multiple case sites; it could be that one, well-chosen case site would be preferable to several that have been chosen for inappropriate reasons.

Part of choosing an appropriate case study for addressing the research objectives is considering the type of case required. For this project, an 'instrumental case study' was selected; in this situation, the 'case' is of secondary interest, it plays a supportive role, and it facilitates our understanding of something else' (Stake, 2008: 123). In the project the case site is not the primary focus of the study; the case is the impact of service change on older people within the context of their community and the setting (or case site) is the chosen community.

A key area of contention within the literature is whether one can, or should, generalise from a case study. Alongside this is the acknowledgement that case study researchers often do generalise their findings as a way of showing their

value (Gomm et al., 2000). One approach to increasing the generalisability of case studies is through using available information about the larger population and seeing how the case population does (or does not) link with this (see Gomm et al., 2000). A similar goal could be achieved through mixed methods; in this project, the meta-inferences draw on all data sources to highlight common threads alongside similarities and differences. Gomm and colleagues (2000) suggest choosing cases on the basis that they are somehow typical of the larger population of interest. This could be achieved through a mixed methods approach, as characteristics of the case study could be matched to known characteristics of the wider issue. This, however, is not always possible (or necessarily desirable) and implies the controversial view that generalisations can only be made from case studies if there is some link with a version of 'representativeness'.

In contrast, Donmoyer (2000) suggests that we should re-think generalisability on the basis that it is not useful in all research contexts. The reworked 'generalisability' should be adapted to suit the end user of the research and aim to offer alternative perspectives (Donmoyer, 2000). This would mean that case studies can be generalisable in an equal, but different, way from statistical generalisability.

3.2.2.1 Alternative approach: focus groups and interviews

The major advantage of using focus groups and interviews with older people (outside of a case study) is the ability to cover different types of rural areas, settings and types of service change occurring across a wider area, such as focus groups and interviews across England. This approach could facilitate a breadth of knowledge of the impact of service change on older people in rural areas; however, this is in contrast to the depth of understanding sought through a case study approach. The key advantage of conducting focus groups and interviews outside of a case study approach is assessed in relation to the disadvantages of doing so.

Focus groups that work well have participants with a mix of similarities and differences between them (Barbour, 2007; Bloor et al., 2001). This could be hard to achieve when comparatively little is known about the area or participants come from different areas. This suggests a greater problem for focus groups and interviews across a wider area (or England as a whole) linked with recruitment. There are no particularly obvious gate-keepers or groups for older residents of rural areas; recruitment may have to involve large-scale leaflet dropping or advertisements in magazines or newsletters that covered a wide geographical area. This approach could lead to groups with very little areas of common interest or similarity amongst participants, necessary to foster discussion (see Barbour, 2007; Bloor et al., 2001). Individual interviews could be a solution to this issue as they are not reliant on group composition.

Both focus groups with little homogeneity between participants and individual interviews with participants across a wide area, present the challenge to a researcher of a loss of context, compared with the case study approach outlined previously. This is a fundamental problem and one that compromises the ability of the research to address gaps in the existing literature.

The gaps identified in the literature review (see section 2.3) highlight a need for research that understands the context of service change in relation to other changes in an area and an approach that can take a holistic view of change and its impact. Whilst it could be possible to gain this understanding through detailed interviews or additional research into the area, it is an aim suited to the case study approach outlined previously.

3.3 Discussion

From examining the advantages and disadvantages of different approaches for the empirical strands of work, I considered that the most appropriate quantitative approach was to use secondary data and a case study for the qualitative strand.

The secondary data chosen to address the first and third research questions comprises a large-scale survey (ELSA), publicly released administrative data from the Commission for Rural Communities (CRC) and administrative data obtained through a Freedom of Information request relating to the Post Office. Across these datasets, a range of analytic techniques are used; the cross-sectional analysis includes descriptive statistics, cross-tabulations and logistic regressions and the longitudinal analysis comprises of descriptive statistics and event history analysis.

Choosing to use secondary data includes engaging with the considerations associated with its use (outlined previously). Before presenting the results of the secondary analysis, the data source is explained, alongside a critique of the available documentation; the design of the data is outlined. The rationale for the selection of variables to be considered in the analysis is noted, alongside the justification behind creating new variables to be included. Finally, the limitations of the data are explored and issues are highlighted that have an impact on the interpretation of the findings.

The case study approach uses a single case to explore service change and the impact on older people living in the community. It utilises a range of methods to gain context to the service environment of the community and the experience of its older residents; a document review is conducted, focus groups and interviews with older people living in the case site and my own fieldnotes.

The choice of using a case study necessitated engaging with the considerations raised regarding this approach (outlined previously). As a result, I have provided an explanation and justification of the selection of the case study. I also detailed the context to the case study and findings to frame any generalisations and discourage over-generalisation by readers.

The analysis of secondary, administrative data relating to the Commission for Rural Communities and the Post Office can be found in chapter four and the secondary analysis of the English Longitudinal Study of Ageing is in chapter five; these chapters include an explanation of the data sources, data

preparation and analysis techniques. The background to the case study is outlined in chapter six (including, the choice of methods, recruitment strategies, ethical considerations and the approach for analysis), with the findings in chapter seven. The meta-inferences from across the different strands of work are detailed in chapter eight

4 Context and case example of service change

This chapter addresses the research objective of assessing whether there are differences in service change between urban and rural areas. I am firstly going to examine issues of access through distances to basic services. The chosen services reflect a range of commonly used outlets: banks and building societies, Post Offices and supermarkets. The distances to these services are examined over time, according to their urban/rural classification to gauge access levels for residents of urban and rural areas and provide a context of service change since 2000. One 'everyday' service, the Post Office, is explored in greater depth as a case example of service change. The Post Office was selected due to its unusual pattern of change over time (compared to the other services listed) and its symbolic association with older people and rural life.

The distances to services data source, preparations and findings are presented first. This structure is then repeated for the Post Office case example before the sections are drawn together for an overall discussion of the implications of the analysis.

4.1 Data source – Commission for Rural Communities

The Commission for Rural Communities has made available, via its website, data showing the distance from each output area in England to a range of key services at four time points: 2000, 2006, 2010 and 2011 (CRC, 2011a). Output areas are groups of postcodes; they are large enough to maintain confidentiality for residents, yet small enough to reflect homogeneous social characteristics, with England consisting of over 170,000 output areas (see ONS, 2015). Before 2010, the method of the Commission for Rural Communities was to take the straight-line distance from each postcode to each service. This was changed from 2010, where the distance was measured by road; the datasets available before 2010 were updated using the new method, therefore ensuring consistency between time points (CRC, 2011a; CRC, 2011b). A fifth wave of data (2012) is available, however it is not used in this study as the data is not available in the same format and there are methodological differences. Using

this wave of data would mean there were inconsistencies in the distances between waves one to four and wave five, affecting the conclusions that could be made regarding changing distances over time; some differences could be attributable to changing measurements rather than service change.

The data were downloaded into Excel and then transferred into Stata. The data were checked for inconsistencies and the variables were explored. Through this process, it was identified that the version of the data originally downloaded for this project contained inaccuracies; the 2011 wave of data did not resemble the data for the previous waves. On contacting the data manager, and after investigation, it appears that the output area distances were the sum of the distances from postcodes, rather than the mean. The 2011 wave was corrected and an updated version sent directly for inclusion in the project.

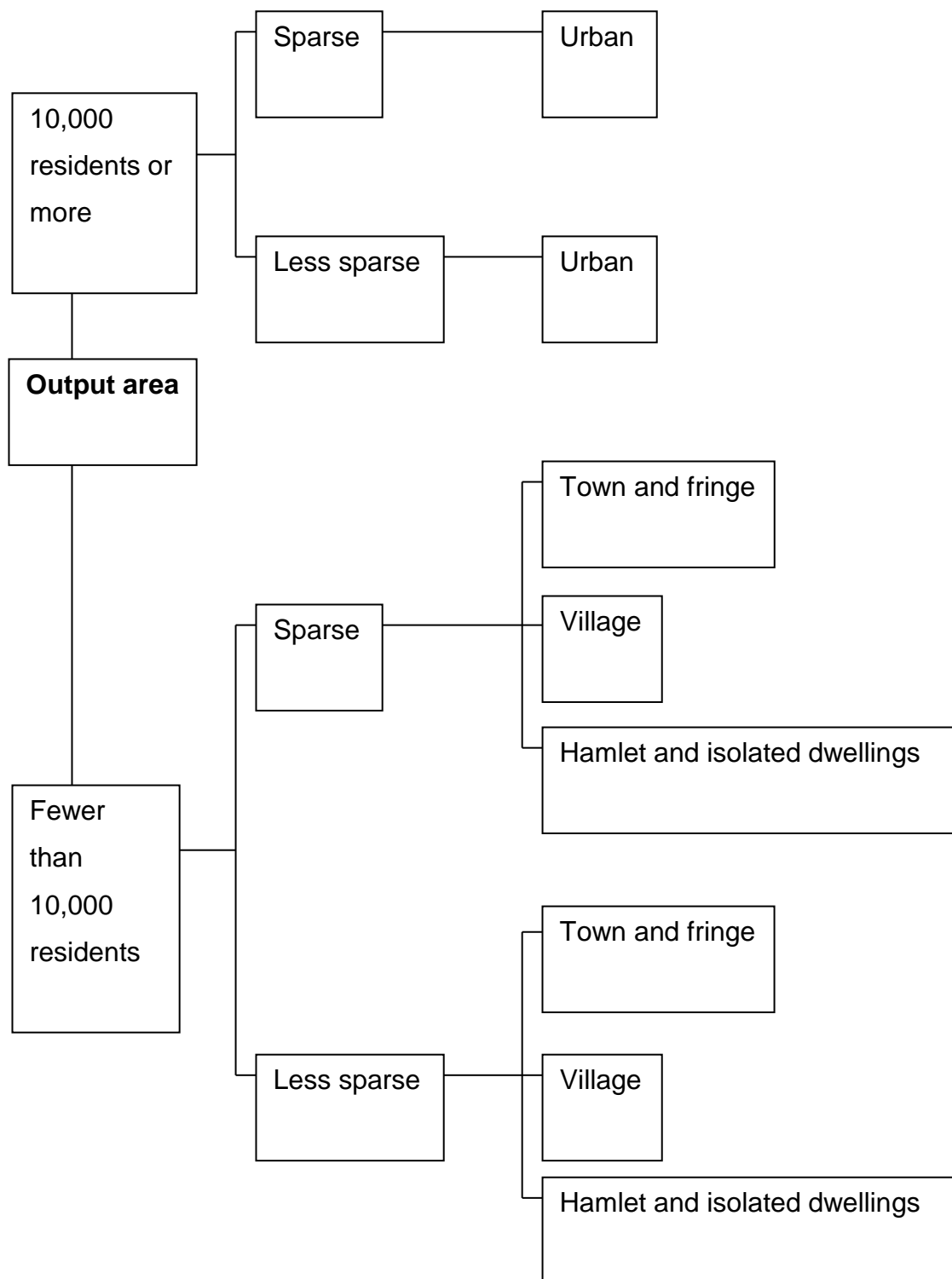
To construct the datasets, all identified service outlets needed to be linked to a postcode. Where this was not possible (due to missing or incorrect information from the data supplier), the individual service outlet was not used as part of the analysis. The nearest service was always in England; for border areas, this could mean that a closer service existed but was not considered if this was in Scotland or Wales, leading to overestimation of distances in these cases (see CRC, 2011b). The datasets available for download are aggregated to output areas, rather than postcode level (CRC, 2011b).

The aim of using this data source was to track changes in distances to services over time. As such, only services that have been examined at each time point are considered. In addition, the CRC have warned that some services cannot be traced over time due to improvements in identifying outlets, which could produce misleading results (see CRC, 2011c). Further, the services need to be relevant to the overall project question and therefore need to be 'everyday' services. Taking these factors into consideration, the services chosen for exploration were banks and building societies, Post Offices and supermarkets. These services meet the criteria of reliability and relevancy and also allow for consistency of service destinations across different data sources.

4.2 Dataset preparation – Commission for Rural Communities

The datasets consisted of the output area code and averaged distance to the closest services for the years 2000, 2006, 2010 and 2011. In order to compare changes across the urban/rural continuum, it was necessary to merge these data with a suitable urban/rural classification. The urban/rural indicator for output areas denotes both the type of settlement and the sparsity of the surrounding area (Bibby et al., 2005). There are four types of settlement in the classification: a settlement is considered 'urban' if it has 10,000 residents or more. There are three types of 'rural' areas, which all have fewer than 10,000 residents and are delineated based on the density of the settlement and surrounding area (Bibby et al., 2005). The sparsity context refers to the density of the population of the broader area and in this sense, is an indicator of the accessibility of the settlement (Bibby et al., 2005). The combination of settlement type and sparsity creates the following two-tier urban/rural classification for output areas.

Figure 4.1 Urban/rural classification for output areas



Source: Bibby et al., 2005

When settlement type and sparsity are both used, the urban/rural classification for output areas has eight categories. This can be collapsed to four categories

(settlement type without the sparsity context) or two categories (urban or rural) (Bibby et al., 2005).

One dataset was then created with the output area code, the distances to banks and building societies, Post Offices and supermarkets for each time point and the urban/rural classification for each output area. This involved merging the separate Commission for Rural Communities data files for each year (containing multiple services), dropping unwanted variables for services not under examination and then merging in the urban/rural classification, which was matched to the unique output area code. This dataset preparation was completed in Excel and Stata.

4.3 Analysis techniques

Tests of significance are used to test an idea about a population through the use of a sample (Morrison and Henkel, 1970; Henkel, 1976; Cowager, 1984). As this study uses the total population of interest – distances to the key services outlined in all output areas of England - the use of significance tests is unnecessary (Morrison and Henkel, 1970; Cowager, 1984).

For these data, the strength of any relationship is important and odds ratios are used to assess this. The odds ratio compares the chances of the outcome occurring, based on two different conditions; it therefore assesses not how likely something is to happen, but how much *more* likely (Rudas, 1998). An odds ratio of one signifies that there is no relationship between the two variables, the strength of the relationship is being interpreted through the distance from one (Rudas, 1998). If all the values in the calculations are positive (as is the case with this project's analyses), then there is no upper limit to the value of the ratio (Rudas, 1998). Odds ratios are presented without confidence intervals, as these are used when the data is a sample of a population (Smithson, 2003).

4.4 Results

First, descriptive tables of distances over time are provided. This is followed by the odds ratios of rural or urban services being outside of a reasonable distance to travel for residents.

4.4.1 Banks and building societies

Table 4.1 The mean distance from output areas to the nearest bank or building society by urban/rural classification, over time

Urban/rural classification	Mean distance to nearest bank or building society (km)				Difference between 2000 and 2011 (km)
	2000	2006	2010	2011	
Urban (sparse)	1.03	1.07	1.03	1.03	0 (0%)
Town and fringe (sparse)	1.37	1.37	1.29	1.30	-0.07 (-5%)
Village (sparse)	7.78	7.75	7.47	7.62	-0.16 (-2%)
Hamlet and isolated dwellings (sparse)	8.38	8.42	7.84	8.39	0.01 (0%)
Urban (less sparse)	1.32	1.34	1.37	1.38	0.06 (5%)
Town and fringe (less sparse)	2.89	2.90	2.97	3.03	0.14 (5%)
Village (less sparse)	5.77	5.81	5.85	5.87	0.10 (2%)
Hamlet and isolated dwellings (less	5.13	5.16	5.20	5.24	0.11 (2%)

As table 4.1 shows, for the four less sparse classifications, the mean distance to the nearest bank or building society increased at each time point; this is indicative of the closure of branches in these areas. Comparatively, the four sparse classifications saw little difference or a decrease in the mean distance to the nearest bank or building society over the period of record. It is possible that this result hints towards banks and building societies being protected in areas considered as sparse by the urban/rural classification. The difference in trajectories between sparse and less sparse areas could be more convincingly attributed to the varying number of output areas per urban/rural category; together, the sparse classification constitutes 1.6 per cent of the output areas in England. It could be that service change did not occur in this small number of output areas by chance, rather than strategic planning.

When the four category classification is used (based only on settlement type, not sparsity), the influence of the sparse areas is overwhelmed. The mean distances to the nearest banking services increased between 2000 and 2011 for all settlement categories, although not monotonically (where the direction of change would be the same at each wave, either increasing or decreasing at each time point) for hamlets and isolated dwellings. Both urban and town and fringe areas see an overall increase of five per cent, compared to one per cent for villages and two per cent for hamlets and isolated dwellings.

An alternative way to interrogate this data is to select an appropriate cut-off distance and examine how many, and which types, of output areas are within this distance. The Commission for Rural Communities (2011a) use a cut-off point of four kilometres in relation to banks and building societies, presumably as an indication of what is considered a reasonable distance to travel; the precise justification for this is not explored in the methodological documents accompanying the data.

Table 4.2 Whether output areas are within or outside four kilometres of the nearest bank or building society, by urban/rural classification in 2011

Distance to nearest bank or building society in 2011	Urban/rural classification of output areas		Total
	Urban	Rural	
4km or under	131, 027 (99%)	16, 073 (49%)	147, 100
Over 4km	1, 706 (1%)	16, 805 (51%)	18, 511
Total	132, 733 (100%)	32, 878 (100%)	165, 611

As table 4.2 shows, the vast majority of urban output areas are within four kilometres of the nearest bank or building society; this compares with around half of the rural output areas. Rural output areas are 105 times more likely to be more than four kilometres away from the nearest bank or building society than urban areas; this is predominantly due to the very small number of urban output areas over four kilometres away.

4.4.2 Post Offices

Table 4.3 The mean distance from output areas to the nearest Post Office by urban/rural classification, over time

Urban/rural classification	Mean distance to nearest Post Office (km)				Difference between 2000 and 2011 (km)
	2000	2006	2010	2011	
Urban (sparse)	0.76	0.84	0.97	1.00	0.24 (32%)

Town and fringe (sparse)	0.87	0.68	0.74	0.75	-0.12 (-14%)
Village (sparse)	1.25	1.44	1.67	1.71	0.46 (37%)
Hamlet and isolated dwellings (sparse)	2.83	2.94	3.09	3.23	0.40 (14%)
Urban (less sparse)	0.67	0.78	0.86	0.86	0.19 (28%)
Town and fringe (less sparse)	0.84	0.74	0.81	0.81	-0.03 (-4%)
Village (less sparse)	1.48	1.59	1.87	1.90	0.42 (28%)
Hamlet and isolated dwellings (less sparse)	2.08	2.19	2.37	2.40	0.32 (15%)

Table 4.3 demonstrates that, in six out of the eight classifications, there has been a monotonic increase in the mean distance to Post Offices between 2000 and 2011; this result implies the closure of Post Office branches. Excluding town and fringe, the different classifications have experienced a similar pattern of increased distance; there is a jump increase between 2000 and 2006, a larger increase between 2006 and 2010 and a plateau between 2010 and 2011. Hamlets and isolated dwellings in sparse areas see an equally large increase in the average distance to the nearest Post Officer between 2010 and 2011 as between 2006 and 2010.

Town and fringe output areas are the only areas to experience an overall decrease in the mean distance to the nearest Post Office. The pattern of change is not monotonic over time; there is a steep decrease between 2000 and 2006, with little change thereafter.

Unlike the banks and building societies, the settlements in sparse areas generally experience greater levels of change, compared to settlements in less sparse areas. When the classification scheme is collapsed to represent settlement type alone, the change is more muted but the same pattern remains. Over the timeframe of the data, and across the urban/rural classifications, there remains an increase in the mean distances to Post Offices by five per cent. Villages encounter the greatest level of change when measured by either kilometre or percentage difference, with an overall increase of 0.42 kilometres (29 per cent).

The Commission for Rural Communities (2011a) appears to use two kilometres as a marker for a reasonable distance to travel to the nearest Post Office. The following cross-tabulation (table 4.4) explores the proportion of urban and rural areas that fall within or outside two kilometres of the nearest Post Office.

Table 4.4 Whether output areas are within or outside two kilometres of the nearest Post Office, by urban/rural classification in 2011

Distance to nearest Post Office in 2011	Urban/rural classification of output areas		Total
	Urban	Rural	
2km or under	129, 819 (98%)	23, 793 (72%)	153, 612
Over 2km	2, 914 (2%)	9, 085 (28%)	11, 999
Total	132, 733 (100%)	32, 878 (100%)	165, 611

Almost all of the urban output areas fall within two kilometres of their nearest Post Office, compared with just less than three quarters of rural output areas. In 2011, rural output areas were 19 times more likely to be more than two kilometres away from the nearest Post Office than urban output areas.

4.4.3 Supermarkets

Table 4.5 The mean distance from output areas to the nearest supermarket by urban/rural classification, over time

Urban/rural classification	Mean distance to nearest supermarket (km)				Difference between 2000 and 2011 (km)
	2000	2006	2010	2011	
Urban (sparse)	1.03	1.03	1.08	1.09	0.06 (6%)
Town and fringe (sparse)	2.45	2.38	2.16	2.00	-0.45 (-18%)
Village (sparse)	8.53	8.57	7.99	8.02	-0.51 (-6%)
Hamlet and isolated dwellings (sparse)	9.43	9.37	8.89	8.85	-0.58 (-6%)
Urban (less sparse)	1.09	1.05	1.05	1.05	-0.04 (-4%)
Town and fringe (less sparse)	2.64	2.34	2.15	2.19	-0.45 (-17%)
Village (less sparse)	5.45	5.23	5.08	5.08	-0.37 (-7%)
Hamlet and isolated dwellings (less sparse)	5.07	4.83	4.64	4.64	-0.43 (-8%)

In table 4.5, seven out of the eight urban/rural classifications encountered a decrease in the mean distance to the nearest supermarket between 2000 and 2011, although the decrease was not always monotonic. Urban sparse was the only classification to see an increase in the mean distance to supermarkets.

There do not appear to be similar patterns in the trajectories of different classifications; jumps and plateaus are present at different times for each of the classifications.

When the classification scheme is collapsed to denote settlement type, all four classifications show a decrease in the mean distance to the nearest supermarket over the period between 2000 and 2011. The smallest kilometre and percentage difference was found in urban areas. Town and fringe areas had the largest percentage difference (17 per cent), with a similar kilometre change as hamlets and isolated dwellings, although this represented only an eight percent difference for this category.

The Commission for Rural Communities (2011a) considers four kilometres to be a reasonable distance to travel to supermarkets. Table 4.6 examines how many rural and urban output areas were within this distance, in 2011.

Table 4.6 Whether output areas are within or outside four kilometres of the nearest supermarket, by urban/rural classification in 2011

Distance to nearest supermarket in 2011	Urban/rural classification of output areas		Total
	Urban	Rural	
4km or under	132, 371 (99.7%)	19, 637 (60%)	152, 008
Over 4km	362 (0.3%)	13, 241 (40%)	13, 603
Total	132, 733 (100%)	32, 878 (100%)	165, 611

Less than one per cent of urban output areas were over four kilometres from the nearest supermarket, compared with 40 per cent of rural output areas. Rural

output areas were 247 times more likely to be more than four kilometres away from the nearest supermarket than urban output areas.

4.5 Data source – Post Office

Having looked at the information and resources provided by The British Postal Museum and Archive (2012), I noticed that there had been a comparatively steep drop in the numbers of post offices in the past decade. I therefore contacted the British Postal Museum and Archive to ask for more information about where these closures had taken place. As additional data were not available and location is not included in routinely collected data about service change, a Freedom of Information request was submitted to Royal Mail for this information. Details were received regarding two programmes of compulsory closures and changes: the 2003-5 Urban Closure Programme; and the 2007-9 Network Change Programme. The information for the 2003-5 Urban Closure Programme was already in a spreadsheet format, but the 2007-9 Network Change Programme data was in decision area booklets and the information had to be transferred into datasets. These booklets were also used for their documentary content to supplement the quantitative data. The information for England is used for this study.

The ‘decision areas’ were the way in which the Post Office split the pre-set number of closures into smaller regions (see House of Commons Public Accounts Committee, 2009; McAnulty and Brown, 2011; Burrows and Griffiths, 2010). The boundaries of the decision areas are around clusters of parliamentary constituencies. The rationale behind this appears to be that service provision changes could be considered across the whole decision area, utilising local knowledge in deciding on the distribution of change (Burrows and Griffiths, 2010; McAnulty and Brown, 2011).

The benefit of this data source is the low-level detail provided, with information about each branch that was closed and each branch that was changed to a different service delivery model (outreaches). This allows an examination of the numbers of closures and changes and where these occurred.

4.6 Dataset preparation – Post Office

4.6.1 2003-5 Urban Closure Programme (first wave of closures)

This dataset was compiled using the spreadsheet sent as part of the Post Office Freedom of Information request. The spreadsheet provided information on all closures that were part of the 2003-5 Urban Closure Programme, including the branch name, postcode and constituency, for the United Kingdom. As the focus of the empirical work of this project is on England, I then separated the closures according to country (see appendix, table 10.1)

The Rural Evidence Research Centre's 'Parliamentary constituencies (2001/2005) urban/rural classification' spreadsheet was used to match the branch's constituency to its urban/rural classification (RERC, 2006). This is based on the Defra (2007) classification of parliamentary constituencies where there are six categories reflecting how urban or rural the constituency is:

- MU – Major Urban – where at least 50 per cent of the population of the constituency live in a major urban area (defined by an area population of more than 750,000 people). Examples of 'major urban' areas are London and Manchester.
- LU – Large Urban – where at least 50 per cent of the population of the constituency live in a large urban area (defined by an area population of between 250,000 and 750,000 people). Examples of 'large urban' areas are Sheffield and Bristol.
- OU – Other Urban – where less than 50 per cent of the population of the constituency live in a rural area and are not part of a major or large urban area.
- SR – Significant Rural – where 33-49.9 per cent of the population lives in a rural area.
- R50 – Rural 50 – where 50-74.9 per cent of the population lives in a rural area.
- R75 – Rural 75 – where at least 75 per cent of the population lives in a rural area (Defra, 2007).

There was no missing data for closures in England.

4.6.2 2007-9 Network Change Programme Closures (second wave of closures)

This dataset was created from the closures outlined in the area decision booklets provided from the Royal Mail. The decision booklets explained each branch's closure and a summary table was produced at the end which listed all of the branches set for closure, their address and postcode and the constituency and local authority that they were part of. Where decisions were still ongoing about the closure of branches at the time of the decision book publication, these further decisions were noted in later, accompanying documentation. The details of each closing branch were then entered into a dataset that I designed.

For each closing branch in England, the Rural Evidence Research Centre's 'Parliamentary constituencies (2001/2005) urban/rural classification' spreadsheet (RERC, 2006) was used to assign each branch an urban/rural classification based on its constituency. Urban/rural classification at the constituency level was chosen, as decisions regarding Post Office closures were made at the level of constituency groups. There is no facility to match an urban/rural classification to the decision area (these areas would also be too big for the classification to have a use), so the constituency level was deemed most appropriate.

Some of the area decision booklets (17 out of 30 for England), however, did not provide information about which constituency branch closures were located. As this information was needed to assign an urban/rural classification, it required discovery by alternative means. The search engine 'election maps' (powered by Ordnance Survey) was used to assign each postcode a constituency.

Occasionally, a postcode from the decision booklet was not recognised as being a valid postcode by 'election maps'; where this occurred an Internet search was made for information about the Post Office branch closure to find any link to a constituency. Where no further information was found, the

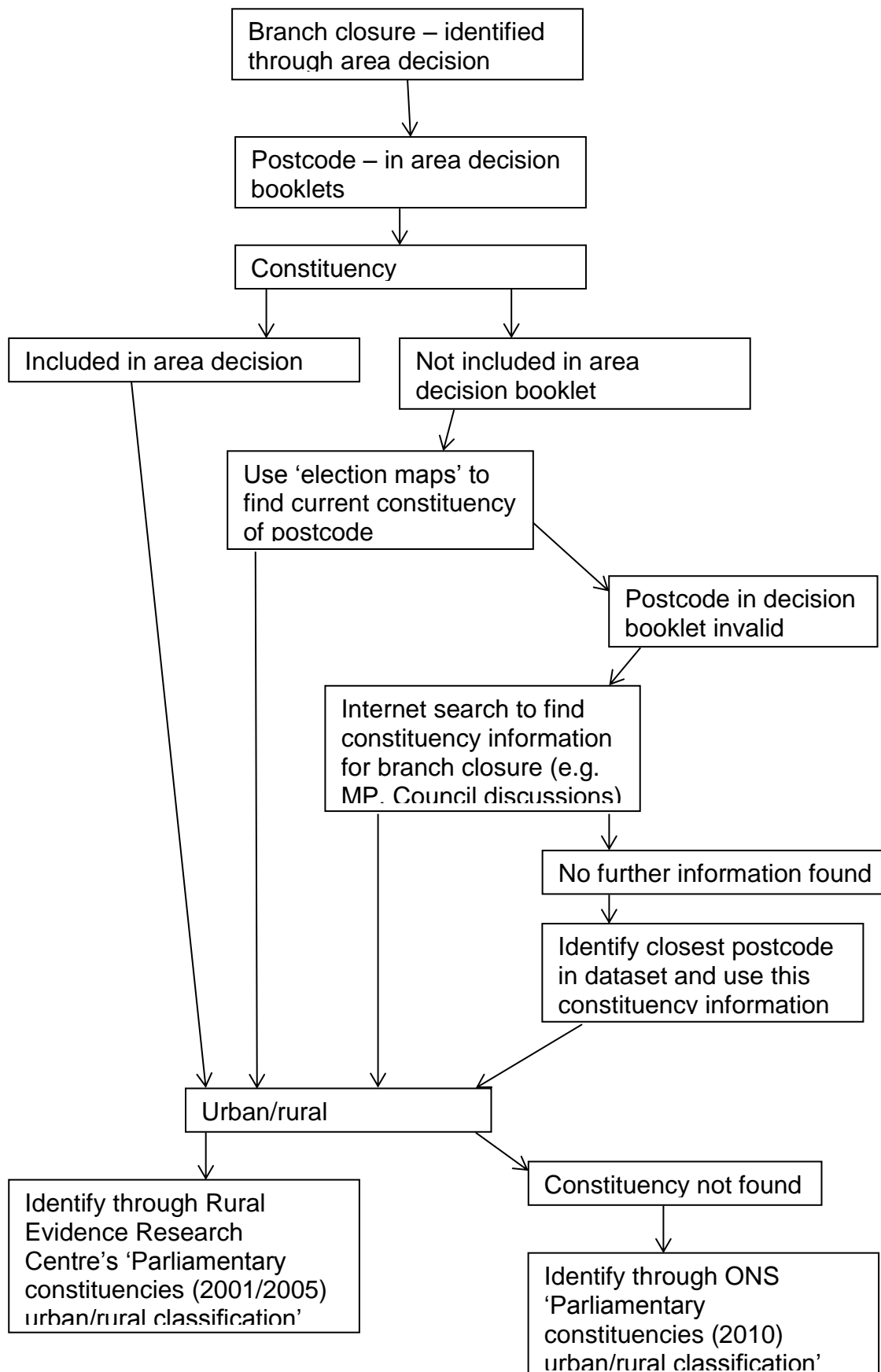
constituency information for the closest postcode already in the dataset was used. This occurred in only 17 cases, which were spread over several decision areas (see appendix, table 10.2).

Where 'election maps' was used to find the constituency for a branch closure, the 2010 constituency was given. This created a challenge as some constituency boundaries had changed. Where the new constituency matched a constituency in the Rural Evidence Research Centre's 'Parliamentary constituencies (2001/2005) urban/rural classification' spreadsheet (RERC, 2006) then, for consistency, this classification was used. Where there was no match, an updated spreadsheet – the ONS (n.d.) 'Parliamentary constituencies (2010) urban/rural classification' – was used for a classification. This happened in 131 cases across England.

Once the missing data had been addressed, and an appropriate value inputted, I then had a dataset detailing each branch closed, with its postcode, constituency and urban/rural classification.

To summarise this process, figure 4.2 shows the various stages and decisions to produce the dataset.

Figure 4.2 2007-9 Network Change Programme dataset production



4.6.3 2007-9 Network Change Programme outreach services

The decision booklets noted each of the existing branches that would be replaced alongside the plans for the replacement outreach service. This included the addresses of the original branch and the outreach, the type of outreach service and additional information, such as the outreach opening times. The number of outreach services varied widely between the decision areas, ranging from none to 38.

There were four main types of outreach services detailed in the booklets. They were:

- Mobile – these use accessible vans to offer most Post Office branch services;
- Hosted – these are services based in a community building. There are set opening days and times and most Post Office branch services are available;
- Partner – these are services offered through a third party and the majority of Post Office branch services are available;
- Home – these services allow a restricted number of services to be ordered over the phone. The products can then be delivered to the customer's address or picked up at a local 'drop-in' (The Post Office, 2013).

The postcode of each outreach service should have been provided but some were missing (for example, where an outreach was planned for 'the lay-by opposite the branch'). Where this occurred, the postcode from the original branch was used for the new outreach.

New variables were derived from the information in the decision booklets to add to the dataset. The first was to include a variable of where the service was based, for example, within a local business. This was possible to tell from some of the addresses of the outreach services, however this information was not always possible to derive. It was also noted when the outreach service was at

the same location as the original branch. Second was a derived variable noting whether the outreach service was a new service to the area or a replacement for a permanent branch. This was inferred from the decision booklets where the outreach service could be listed next to a permanent branch (meaning it was replacing the branch) or on its own (meaning it was a new service). This variable, however, did not prove to be particularly useful as only one outreach service (out of 297) was new.

The search engine ‘election maps’ (powered by Ordnance Survey) was used to find the current constituency of the service based on its postcode. This was then matched to the Rural Evidence Research Centre’s ‘Parliamentary constituencies (2001/2005) urban/rural classification’ spreadsheet (RERC, 2006) to assign the urban/rural classification. Where it was not possible to match a constituency to this spreadsheet, due to parliamentary border changes, the ONS ‘Parliamentary constituencies (2010) urban/rural classification’ spreadsheet (ONS n.d.) was used instead.

4.6.4 Analysis techniques

As with the data from the Commission for Rural Communities, above, this is population level data, rather than a sample and the same strategy is used. The population of interest is all compulsory closures or service provision changes made by the Post Office in the Urban Closure and Network Change Programmes. Odds ratios, as previously outlined, are used to display the strength of the relationship between variables.

4.7 Results

Table 4.7 The total number of Post Offices from 2002-13 across the UK

Year end (March)	Number of urban Post Offices	Rural Post Offices		
		Total	Traditional branches	Outreaches

2000	9,099	9,294	9,242	52
2001	8,993	8,853	8,803	50
2002	9,124	8,460	8,381	79
2003 NRP	8,894	8,345	8,165	180
2004 NRP	7,780	8,181	7,991	190
2005 NRP	6,572	8,037	7,853	184
2006	6,522	7,854	7,591	263
2007 NCP	6,477	7,742	7,429	313
2008 NCP	6,160	7,407	6,991	416
2009 NCP	5,385	6,567	5,765	803
2010	5,359	6,546	5,613	933
2011	5,351	6,469	5,490	979
2012	5,363	6,455	5,438	1,017
2013	5,351	6,429	5,367	1,062

Note: NRP is 'Network Reinvention Programme', NCP is 'Network Change Programme'.

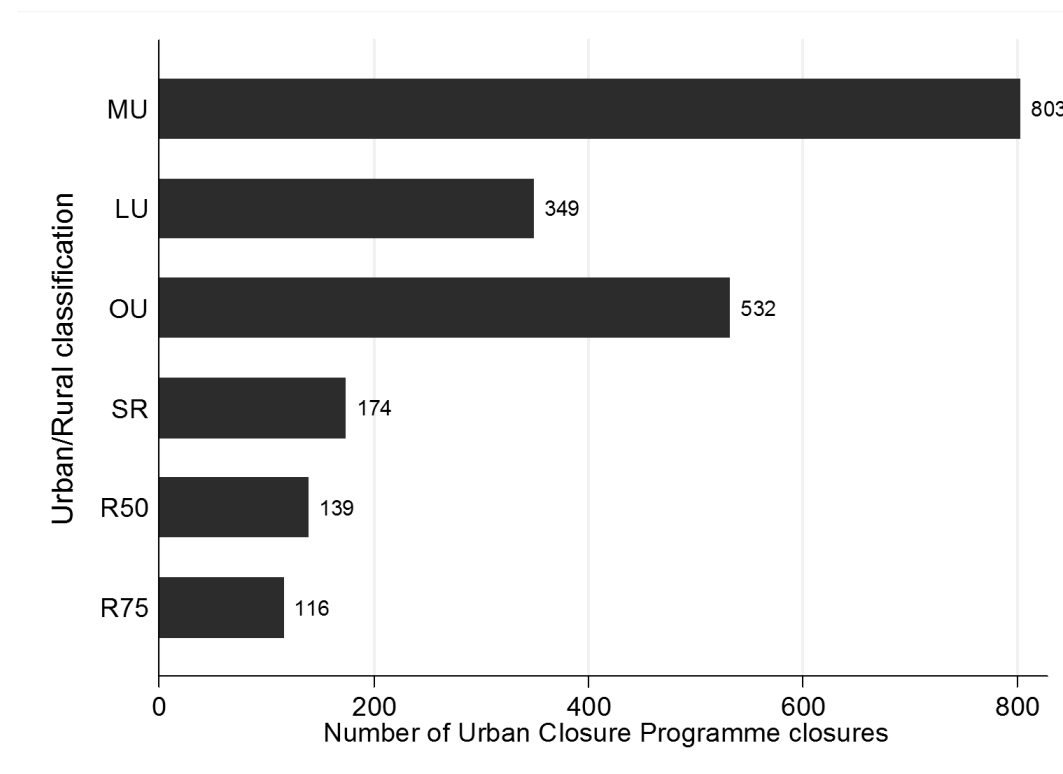
Source: Hough, 2014.

It is clear from table 4.7 that the number of Post Offices is in decline, with spikes in the decline coinciding with the closure programmes. In addition, the proportion of rural Post Offices that are Outreach services is growing over time.

These findings relate to two programmes of closures set out by the Post Office; the Urban Closure Programme (2003-5) and the Network Change Programme (2007-9). These programmes compulsorily closed Post Offices across the UK; however not all of the closures shown in the table from 2002-13 were part of a closure programme. In addition, there are some closures during the years of closure programmes that were not a part of the programmes. The scope of the findings explained here covers the Post Office closures that were the result of either the Urban Closure Programme or the Network Change Programme in England.

4.7.1 2003-5 Urban Closure Programme

Figure 4.3 The number of 2003-5 Post Office closures by urban/rural classification



Note: 'MU' – Major Urban, 'LU' – Large Urban, 'OU' – Other Urban, 'SR' Significant Rural, 'R50' – Rural 50 and 'R75' – Rural 75.

N = 2,113.

From figure 4.3, it is clear that the greatest number of closures occurred in the major urban areas (N = 803, 38 per cent). In total, 1,684 (79.70 per cent) of the closures were in urban areas. This result was to be expected as these closures came under the heading of the Urban Closure Programme.

Unexpectedly, given that this was ostensibly an urban closure programme, 20.30 per cent of (N = 429) closures were actually in rural areas, with 5.49 per cent (N = 116) in the very rural category.

To address any concerns that these findings could reflect pockets of change rather than change across the whole of England, closures according to constituency areas were examined (table 4.8).

Table 4.8 Whether there was a 2003-5 closure by urban/rural classification in each Parliamentary constituency

Constituency had a 2003-5 closure	Urban/rural classification		Total
	Urban	Rural	
No	6 (1.69%)	28 (16.09%)	34 (6.43%)
Yes	349 (98.31%)	146 (83.91)	495 (93.57%)
Total	355 (100%)	174 (100%)	529 (100%)

Closures in the Urban Closure Programme were 11.16 times more likely to occur in urban constituencies than rural constituencies. Even so, the majority of rural constituencies also experienced a closure (table 4.9).

Table 4.9 Whether there was a 2003-5 closure by full urban/rural classification in each Parliamentary constituency

Constituency had a 2003-2005 closure	Urban/rural classification						Total
	Major urban	Large urban	Other urban	Significant rural	Rural 50	Rural 75	
No	2 (1.13%)	2 (2.67%)	2 (1.94%)	3 (6.12%)	2 (3.85%)	23 (31.51%)	34 (6.43%)
Yes	175 (98.87%)	73 (97.33%)	101 (98.06%)	46 (93.88%)	50 (96.15%)	50 (68.49%)	495 (93.57%)
Total	177 (100%)	75 (100%)	103 (100%)	49 (100%)	52 (100%)	73 (100%)	529 (100%)

When the urban/rural classification is broken down (see table 4.9), the general trend shows that the more rural the constituency, the lower the likelihood of Post Office closure.

Table 4.10 Whether there were more or fewer than the mean number of 2003-5 closures by urban/rural classification in each Parliamentary constituency

Number of closures in a constituency compare to the mean number of closures (4)	Urban/rural classification		Total
	Urban	Rural	
Fewer than the mean number	119 (33.52%)	131 (75.29%)	250 (47.26%)
More than the mean number	236 (66.48%)	43 (24.71%)	279 (52.74%)
Total	355 (100%)	174 (100%)	529 (100%)

When comparing the number of closures in a constituency to the mean number of closures per constituency (four), it is clear that urban constituencies had more closures than the mean and rural areas tended to have fewer closures than the mean (see table 4.10). This is backed by the odds ratio that shows that urban constituencies were 6.04 times more likely to have more than the mean number of closures than rural constituencies. Overall, table 4.11 shows that with increasing rurality, constituencies were less likely to have more than the mean number of closures.

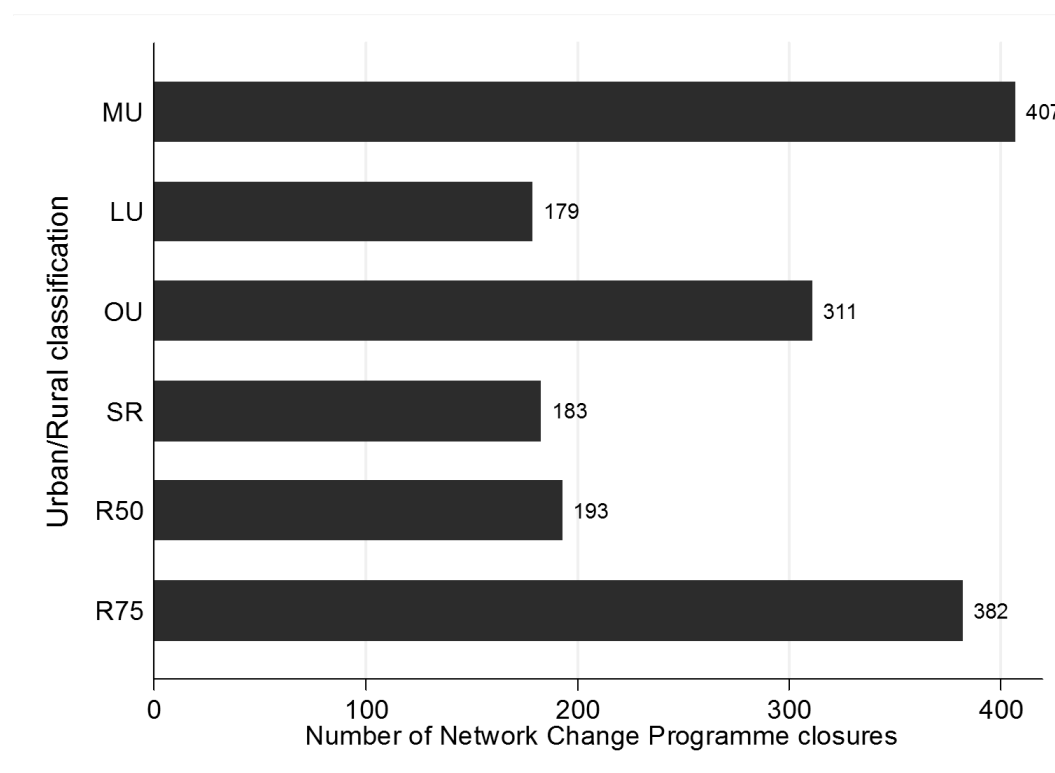
Table 4.11 Whether there were more or fewer than the mean number of 2003-5 closures by full urban/rural classification in each Parliamentary constituency

Number of closures in an area compare to the mean number of closures (4)	Urban/rural classification						Total
	Major Urban	Large Urban	Other Urban	Significant Rural	Rural 50	Rural 75	
Fewer than the mean	58 (32.77%)	24 (32.00%)	37 (35.92%)	28 (57.14%)	39 (75.00%)	64 (87.67%)	250 (47.26%)
More than the mean	119 (67.23%)	51 (68.00%)	66 (64.08%)	21 4 (2.86%)	13 (25.00%)	9 (12.33%)	279 (52.74%)
Total	177 (100%)	75 (100%)	103 (100%)	49 (100%)	52 (100%)	73 (100%)	529 (100%)

The second wave of closures, unlike the first, was not aimed at a specific type of area. The Network Change Programme included both outright closures, and closures, with replacement by an outreach branch. As the structure of the second programme was so different from the first, the findings were not expected to be similar and were split into closures and closures replaced by an outreach service.

4.7.2 2007-9 Network Change Programme – closures not replaced by Outreach branches

Figure 4.4 The number of 2007-9 Post Office closures by urban/rural classification



Note: 'MU' – Major Urban, 'LU' – Large Urban, 'OU' – Other Urban, 'SR' Significant Rural, 'R50' – Rural 50 and 'R75' – Rural 75.

N = 1,655.

Figure 4.4 shows that there were similar numbers of 2007-9 Post Office closures in the very urban (24.59 per cent) and the very rural (23.08 per cent)

areas. Broadly, 54.20 per cent of the closures were in urban areas compared to 45.80 per cent in rural areas.

A similar trend also exists when English constituencies are examined to see the proportions that had a closure.

Table 4.12 Whether there was a 2007-9 closure by urban/rural classification in each Parliamentary constituency

Constituency had a 2007-9 closure	Urban/rural classification		Total
	Urban	Rural	
No	23 (6.48%)	2 (1.13%)	25 (4.70%)
Yes	332 (93.52%)	175 (98.87%)	507 (95.30%)
Total	355 (100%)	177 (100%)	532 (100%)

Table 4.12 shows that rural constituencies were more likely to experience a closure than urban constituencies; this is supported by the odds ratio which suggests that the Network Change Programme closures were 6.06 times more likely to occur in rural than urban constituencies. This is surprising, as the programme of closure was not aimed at either urban or rural constituencies, suggesting that similarities across urban and rural constituencies should have been expected. When the full urban/rural classification is examined, it broadly shows that the more rural the constituency, the more likely it was to have a closure (see table 4.13).

Table 4.13 Whether there was a 2007-9 closure by full urban/rural classification in each Parliamentary constituency

Constituency had a 2007-2009 closure	Urban/rural classification						Total
	Major Urban	Large Urban	Other Urban	Significant Rural	Rural 50	Rural 75	
No	13 (7.34%)	4 (5.33%)	6 (5.83%)	0	2 (3.85%)	0	25 (4.70%)
Yes	164 (92.66%)	71 (94.67%)	97 (94.17%)	49 (100%)	50 (96.15%)	76 (100%)	507 (95.30%)
Total	177 (100%)	75 (100%)	103 (100%)	49 (100%)	52 (100%)	76 (100%)	532 (100%)

Table 4.14 Whether there were more or fewer than the mean number of 2007-9 closures by urban/rural classification in each Parliamentary constituency

Number of closures in an area compare to the mean number of closures (3)	Urban/rural classification		Total
	Urban	Rural	
Fewer than the mean number	268 (75.49%)	70 (39.55%)	338 (63.53%)
More than the mean number	87 (24.51%)	107 (60.45%)	194 (36.47%)
Total	355 (100%)	177 (100%)	532 (100%)

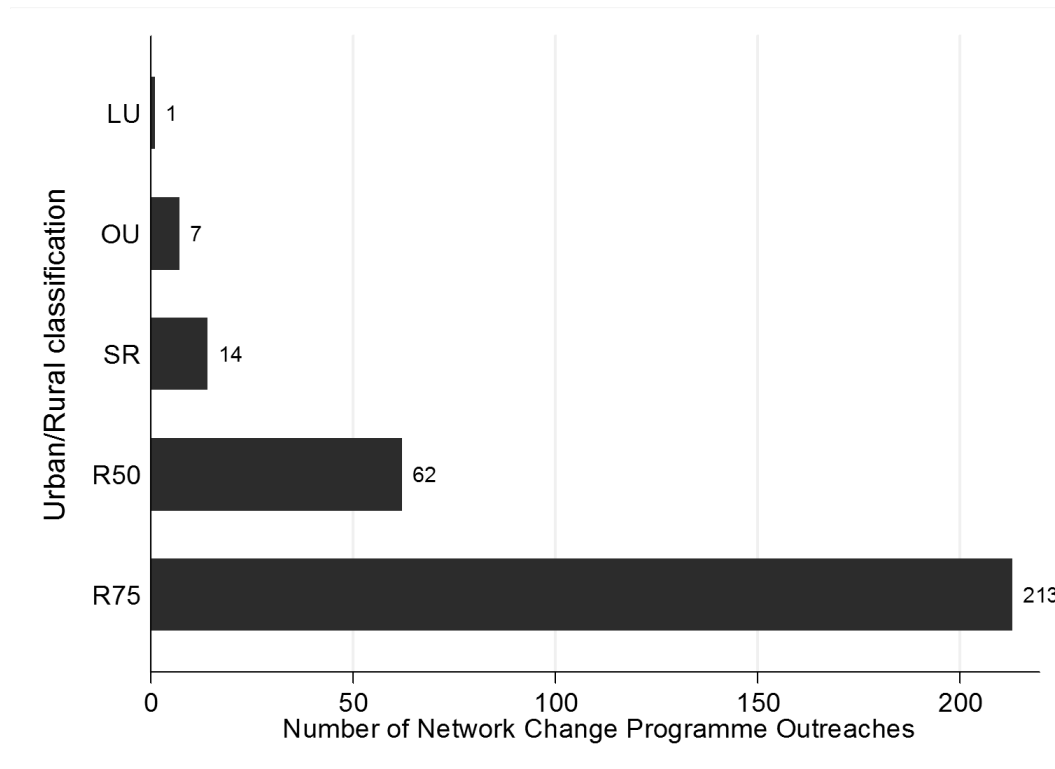
The mean number of closures per constituency was three; rural constituencies were 4.71 times more likely to have more than the mean number of three closures per constituency than were urban constituencies (table 4.14). Across the full urban/rural continuum, increasingly rural constituencies were more likely to have more than the mean number of closures (see table 4.15).

Table 4.15 Whether there were more or fewer than the mean number of 2007-9 closures by full urban/rural classification in each Parliamentary constituency

Number of closures in an area compare to the mean number of closures (3)	Urban/rural classification						Total
	Major Urban	Large Urban	Other Urban	Significant Rural	Rural 50	Rural 75	
Fewer than the mean	142 (80.23%)	58 (77.33%)	68 (66.02%)	22 (44.90%)	23 (44.23%)	25 (32.89%)	338 (63.53%)
More than the mean	35 (19.77%)	17 (22.67%)	35 (33.98%)	27 (55.10%)	29 (55.77%)	51 (67.11%)	194 (36.47%)
Total	177 (100%)	75 (100%)	103 (100%)	49 (100%)	52 (100%)	76 (100%)	532 (100%)

4.7.3 2007-9 Network Change Programme – Outreach

Figure 4.5 The number of new 2007-9 Post Office outreach services by urban/rural classification



Note: 'LU' – Large Urban, 'OU' – Other Urban, 'SR' Significant Rural, 'R50' – Rural 50 and 'R75' – Rural 75.

N = 297.

Almost all of the outreach services were implemented in rural areas ($N = 289$, 97.31 per cent). When examining individual categories, the majority of outreach services were placed in the most rural areas ($N = 213$, 71.72 per cent).

The types of outreach services, where they were located and the type of area varied greatly. Hosted services were the most common type of outreach service ($N = 132$, 44.44 per cent). This is followed by similar rates of mobile ($N = 77$, 25.93 per cent) and partner services ($N = 61$, 20.54 per cent). The least common type of outreach was home services ($N = 19$, 6.40 per cent).

There is some suggestion from the data that the type of outreach service may be fluid, with the possibility of changes in the future to other types of outreach provision that may offer more limited services. The outreach data showed that nine (out of 19) of the new home services were previously mobile services rather than post office branches, with the area decision booklet attributing the need for home services to the low usage of the mobile service (Post Office FOI response, 2012). This suggests that home outreach services may be used as a way of scaling down post office services when customers do not make sufficient use of existing outreach provision and could mean that there is the potential for more of these changes in the future.

The majority of outreach services, excluding home and mobile services, were in the same location as the previous post office branch (N = 82, 43.62 per cent). This scenario may reduce the impact on physical access to post office services as the location remains the same; however service opening times were likely to be affected.

Looking at the broader constituency level for changes, it is still clear that outreach services were overwhelmingly focused in rural constituencies.

Table 4.16 Whether there was a 2007-9 outreach by urban/rural classification in each Parliamentary constituency

Constituency had a 2007-9 outreach	Urban/rural classification		Total
	Urban	Rural	
No	349 (98.59%)	108 (60.34%)	457 (85.74%)
Yes	5 (1.41%)	71 (39.66%)	76 (14.26%)
Total	354 (100%)	179 (100%)	533 (100%)

Unsurprisingly, rural constituencies were far more likely to have an outreach service implemented (even though this occurred in a minority of them). The odds ratio suggests that rural constituencies were 45.89 times more likely to have an outreach service implemented than were urban constituencies. Across the urban/rural spectrum, the more rural the constituency, the more likely it was to have an outreach service (see table 4.17).

Table 4.17 Whether there was a 2007-9 outreach by full urban/rural classification in each Parliamentary constituency

Constituency had a 2007-2009 outreach	Urban/rural classification						Total
	Major Urban	Large Urban	Other Urban	Significant Rural	Rural 50	Rural 75	
No	169 (100%)	67 (98.53%)	113 (96.58%)	38 (77.55%)	35 (71.43%)	35 (43.21%)	457 (85.74%)
Yes	0	1 (1.47%)	4 (3.42%)	11 (22.45%)	14 (28.57%)	46 (56.79%)	76 (14.26%)
Total	169 (100%)	68 (100%)	117 (100%)	49 (100%)	49 (100%)	81 (100%)	533 (100%)

4.7.4 Analysis across programmes of change

Table 4.18 Urban/rural classification by programme of change

Programme of change	Urban/rural classification	
	Rural	Urban
Urban Closure	429 (29.07%)	1,684 (65.04%)
Network Change	1,047 (70.93%)	905 (34.96%)
Total	1,476 (100%)	2,589 (100%)

Examining each programme of change (table 4.18), 70.93 per cent of the 2007-9 Network Change Programme changes occurred in rural areas compared with just 29.07 per cent of the 2003-5 Urban Closure Programme. This is supported by the odds ratio that shows that in the change programme of 2007-9 it was 4.54 times more likely that change would occur in rural areas than in the change programme of 2003-5.

Table 4.19 Urban/rural classification by type of service change

Type of service change	Urban /rural classification		Total
	Rural	Urban	
Closure	1,187 (31.50%)	2,581 (68.50%)	3,768 (100%)
Outreach	289 (97.31%)	8 (2.69%)	297 (100%)
Total	1,476 (36.31%)	2,589 (63.69%)	4,065 (100%)

Of the 4,065 service changes enforced by the Post Office (see table 4.19), 97.31 per cent of the outreach services were implemented in rural areas, compared with only 31.50 per cent of closures taking place in rural areas. This is backed by the odds ratio, which shows that outreach services were 78.55 times more likely to be implemented in rural areas than closures.

Comparing the two programmes of change, across all urban/rural classifications, the largest difference appears to be with the very rural areas (R75); 5.49 per cent of closures in the 2003-5 programme were in R75 areas compared to 30.48 per cent of changes in the programme of 2007-9.

Examining the total number of changes across the urban/rural continuum, it is striking how many were implemented in the very rural areas (the third most likely type of area, behind major urban and other urban, to experience change). The very rural areas appear to be the most vulnerable among rural classifications to change, with significant rural and rural 50 areas having far fewer changes implemented.

4.8 Discussion

The limitations of both the data sources used in this chapter are outlined first. Secondly, the distances to services analysis will be discussed before moving to consider the implications of the Post Office case example findings. Finally, the two strands will be brought together and an assessment of the chapter's contribution to the overall study will be made.

Whilst both the datasets were useful in assessing urban/rural differences in access to services, their use was not without consideration of the constraints. A limitation of the Commission for Rural Communities data source is the implications of the change in measurement of the distance to services from 'straight line' to road distances. This change is positive and retrospective changes were made to the 2000 and 2006 data to allow for comparisons over time. The difficulty with this, however, is that current road distance data was used in the retrospective changes and, given that there is more than a decade

between the first and last time point, this could mean some inaccuracies due to changes in the road network (see CRC, 2011b).

The Commission for Rural Communities dataset contains relatively few variables. This restricted the range of analysis techniques that could be used to explore the data. Further, the accompanying dataset preparation information is very limited. Some decisions are left unjustified or poorly explained, such as the decision to use certain cut-off points for distances to services. This means that the data user has to infer the reasons behind these decisions.

Relating to the Post Office case example of change, the limitation of using a Freedom of Information request as a source of data is that it only covers closures enforced by the Post Office (meaning it does not include closures for other reasons). This means that the findings could underestimate the number of closures during these time periods. However, the datasets do include every compulsory closure and outreach service during the defined periods. The datasets therefore represent the total population of interest (compulsory closures and outreaches implemented in programmes of change) rather than a sample. Having data linked to compulsory programmes of change does mean that it would be inappropriate to make generalisations between these changes and changes made by the Post Office under different circumstances.

In addition, there was some missing information for the 2007-9 Network Change Programme, which was found using a variety of methods. Further, as the datasets contain few variables, this limited the range of analytical techniques that could be applied to the data, as with the Commission for Rural Communities data source.

The decision to categorise Post Office change according to the constituency level urban/rural classification means applying a label to a reasonably large geographical level. Whilst this was chosen to provide consistency with the Post Office's decision area plans, the classification is an indication of the type of area in which change occurred, rather than the precise location of the service.

Examining average distances across the services, there are different patterns of change for each service. There is a divide in trajectories between sparse and less sparse settlement types in the mean distances to banks and building societies. The prevailing pattern for mean distances to Post Offices was increases followed by a plateau. With supermarkets, there was no discernible similarity amongst the trajectories of the urban/rural classifications. Both banks and buildings societies and Post Offices were associated with increased distances between 2000 and 2011, suggesting branch closures. By comparison, supermarkets became more accessible over the same timeframe suggesting new stores had opened. This finding of heterogeneity in the changes in distances to services over time could be problematic for policymakers. The different patterns of change for each service means that generalisations across services about loss or growth are inappropriate; assessments of overall service change will require detailed and nuanced examinations of individual services in order to produce robust conclusions about the service environment.

One result, however, was consistent within and across the different services; rural areas were faring either similarly or worse than urban areas, especially villages and hamlets and isolated dwellings. This disparity between rural and urban service access was highlighted by the odds ratios of being within a 'reasonable' distance of the nearest service; rural areas were up to 247 times more likely to be outside this distance than urban areas. Other issues related to access may compound the disadvantage of rural areas being outside 'reasonable' distances to services. Distances to services is only one barrier to access; the availability and suitability of public transport (see Help the Aged, 2007a summary in the literature review) to services could further reduce access to services for rural residents.

The mean distances to Post Offices were unusual compared with the data for banks and buildings societies and supermarkets. The levels of change, both in terms of kilometre and percentage differences, were much higher than the other services. In addition, there was a similar pattern of change amongst most of the urban/rural categories across the four waves of data. The comparability of trajectories of change suggests that coordinated closures. As distances to the

Post Office increased in most of the urban/rural categories across England, it can be inferred that this change was widespread.

The correlation of patterns of change, a feature specific to the Post Office from this data, was worth greater exploration to understand the drivers of this type of change. The reasons for coordinated change and a closer examination of the rurality dimension of change were suitable for further investigation; this was explored via the case example of change.

The first research strand of this case example of change was to find out which types of areas had experienced changes to their Post Offices in the compulsory closure and outreach programmes. The majority of closures in the 2003-5 Urban Closure Programme were in urban areas (particularly major urban areas); however, around one fifth of these closures occurred in a rural constituency. The discovery that a significant minority of closures were in predominantly rural areas, in a programme seemingly targeting urban areas, is unexpected. Whilst the individual branches closed could have been in urban areas within the rural constituency, it may reasonably have also served the surrounding rural population. This could suggest that Post Offices in mostly rural areas were vulnerable to closure in the period of 2003-5 without this being explicitly acknowledged.

During the 2007-9 Network Change Programme, closures were most likely to occur in the major urban and very rural areas. The outreach strand of Network Change Programme was implemented overwhelmingly in rural areas, particularly in the very rural areas. From examining where the compulsory Post Office changes took place, it appears that the very rural areas were unexpectedly vulnerable to change. These areas experienced closures in the 2003-5 Urban Closure Programme, even though they were at the opposite end of the urban/rural spectrum. The very rural areas were also hit with almost a quarter of the 2007-9 Network Change Programme closures and nearly three quarters of the outreach services.

Assessing whether the compulsory closures and outreaches in the 2007-9 Network Change Programme met the government criterion relating to equity across areas, produced mixed results. There is evidence to support and refute the government criterion that:

‘There should be a broadly similar number of compulsory compensated branch closures pursuant to the Programme [Network Change Programme] in rural areas as in urban areas (including deprived urban areas) across the UK as a whole’ (Post Office FOI response, 2012).

Similar numbers of closures were found in urban and rural constituencies, meeting the government criteria. There is evidence, however, that these closures were not equally distributed across the urban/rural continuum. This is demonstrated by the large proportion of closures in the most rural areas (23.08 per cent). In addition, when examining whether there was a Network Change Programme closure in every parliamentary constituency, rural constituencies were six times more likely to have a closure than urban constituencies.

Whilst the Government criterion may be met at the broadest level, this finding highlights the dangers of ignoring the different types of urban and rural areas. The Government criteria allow for important differences in which urban and rural areas are affected to be overlooked, potentially to the detriment of the areas at the extremes of the continuum.

The evidence is clearer in relation to the government criterion that:

‘The population of any one area, any one country in the UK or any group of people is not to be overall significantly more adversely affected by the Programme than the population of any other area, country or group of people (as appropriate)’ (Post Office FOI response, 2012).

The evidence from this research suggests that Post Office did not meet this criterion in relation to their outreach services. It appears that the most rural areas had been targeted with different services from the rest of the population.

While the Post Office Network Change Programme area plans state that the purpose of outreach services is 'to mitigate the impact of the proposed closures in some areas' (Post Office FOI response, 2012), there is no suggestion that these areas would necessarily be rural.

Central to issues around the impact in rural areas of Outreach services, is whether these alternative forms of service provision are a downgraded version of a Post Office branch. Typically, Outreaches are couched in terms of downgrading or reducing the service on offer (see McNulty and Brown, 2011; Langford and Higgs, 2010), which would imply that a lesser service is being offered in these areas, which is at odds with the government criterion. There are also hints in the evidence of this study that outreach services may be vulnerable to further downgrading over time.

Clearly, the reality of the changes is that outreach services were in the most rural areas. It is possible that these areas had been targeted so that the Post Office can meet criteria set out by the Government, insisting that 95 per cent of the UK's rural population would need to be within 3 miles of their nearest Post Office branch once the changes had been implemented (Post Office FOI response, 2012). Outreach services can therefore be seen as a means of the Post Office meeting this target, whilst also closing permanent rural branches (also see Langford and Higgs, 2010).

The evidence from the Post Office case example overall suggests that government criterion aiming for equity of impact in relation to the changes had not been met. It seems that one group of people (the residents of the most rural areas) were open to being disproportionately adversely affected by this programme of change, contrary to Government intention.

Bringing the findings of the two strands of the chapter together, even with the policy of rural proofing, very rural areas are still not protected from a high level of change. The Commission for Rural Communities' distances to services data suggested that rural areas have undergone changes in a variety of services, at different rates, across more than a decade. It is reasonable to think that service

provision changes, like the compulsory introduction of outreaches, would meet the rural proofing criteria, as a Post Office service is still being offered (though potentially limited) to rural areas although in a different format from urban areas. These alternative forms of service delivery may not meet the needs of the rural population, especially for people with limited mobility, who are reliant on inadequate public transport or who have health problems. The assumption that service change or loss will not negatively affect residents may also underestimate the social role that these services can have in rural areas (Gray et al., 2006; Dobbs and Strain, 2008; Dwyer and Hardill, 2011; Bosworth, 2012; Ward et al., 2013); the loss of a Post Office could mean the loss of a social hub in a village. In addition, there has been research since the implementation of outreach services which suggests that customers in some situations did not feel as comfortable using the services as they did in the branch. For example, the Consumer Focus' investigations found that customers may not feel at ease dealing with their finances in some community locations (such as pubs) or when other customers in a mobile service can see or hear their private transactions (Burrows and McAnulty, 2010). This further suggests that an assumption around the transferability of types of service delivery may not hold true.

The current policy of rural proofing fails to take into account the accumulation of service loss and the fluidity of service provision; something indicated in the Commission for Rural Communities' data. Further, rural proofing does not acknowledge the impact on groups that may struggle as a result of change, which has broader implications for policy principles of equality. The presence of a policy does not guarantee that it is adhered to. The evidence from this study suggests that specific, targeted government criteria are not necessarily adhered to, questioning the role of broader policies to influence practice.

Overall, the results from the two data sources contribute evidence to the overall study regarding differential access to services for rural and urban residents. The evidence here suggest that very rural areas may be particularly vulnerable to service change. This is a concern as the impacts of changes in these areas are likely to fall disproportionately on older people as they are overrepresented in rural areas. The impact of change needs to be viewed through a broad lens;

change in rural areas is cumulative, there may be reduced public transport options and some older people could have limited mobility. The role of services in rural areas requires a wider perspective and the social role of services needs to be acknowledged.

A policy that addresses service change in rural areas, protecting those most risk is lacking. The policy of rural proofing is limited in its scope. It is hoped that Defra may be aiming to change this as a result of commissioning research into how services should respond to an ageing population (Connors et al., 2013).

5 Perceived access to ‘everyday’ services: The English Longitudinal Study of Ageing

An individual’s perception of access to services may not match with objective measurements of accessibility. With access at the intersection of person-environment fit, it is important to include subjective assessments of the community environment; corresponding with the usability approach to access measurement (Iwarsson and Ståhl, 2003).

This strand of empirical work attends to the second research objective, which assesses whether there is a rural dimension to how older people perceive their access to services. Both cohort and longitudinal analyses of data from the English Longitudinal Study of Ageing are used to meet this objective. The data source is outlined before the cohort and longitudinal analysis; methods and results are provided for each, separately. The analyses are followed by a joint discussion of the results.

5.1 Data Source

The English Longitudinal Study of Ageing (ELSA) is a panel survey aiming to facilitate the understating of experiences of ageing and the possible reasons for variations in this. At the time of this research, there were five waves available to use. The fieldwork for each wave was conducted over approximately one year. Wave 1 fieldwork took place between March 2002 and March 2003; Wave 2 fieldwork between June 2004 and July 2005; Wave 3 between May 2006 and August 2007; Wave 4 between May 2008 and July 2009; and Wave 5 between June 2010 and July 2011 (NatCen, 2012). All of the interviews, at every wave, consisted of a face-to-face computer assisted personal interview and a self-completion questionnaire (NatCen, 2012).

5.1.1 Sample

The population of interest is people aged 50 and over living in private households in England. The sample is based on respondents from the Health Survey for England (HSE) who took part in 1998, 1999 or 2001 and who met the

ELSA population criteria. The HSE is a nationally representative sample of the population living in private households in those years, with sample addresses drawn from the Postcode Address File (Joint Health Surveys Unit, 1998; Joint Health Surveys Unit, 1999; Joint Health Surveys Unit, 2001). As ELSA follows the same people over time, a refreshment sample was introduced in wave 3 to fill the gap at the youngest age ranges. This refreshment sample included people aged 50 to 53 who were previous participants in the HSE. Another refreshment sample was introduced in wave 4; this sample was drawn from the HSE and included people aged 50 to 74 (NatCen, 2012).

The core members of the sample, those drawn from the HSE, remain as participants until they choose to withdraw from the survey, move out of Britain or die (NatCen, 2012). Whilst the core members are approached for an interview at every wave, it is possible for the interview to be carried out by a proxy. This can happen if the core member has a physical or cognitive impairment or is in hospital or temporarily in a care facility, making a personal interview unviable. The proxy can be anyone aged 16 or over who is able to answer questions on the panel member's behalf, and is chosen by the interviewer. The full questionnaire is not administered to the proxy (NatCen, 2012). Core members continue to be interviewed if they move into residential care, or a similar facility. In these cases, an adapted questionnaire is used and it is still possible to have a proxy interview (NatCen, 2012). Partners who live with the core member are also interviewed; this includes cohabiting partners and cohabiting spouses and the partner does not need to be 50 or over (NatCen, 2012).

5.1.2 Response rates

Table 5.1 The number of interviews conducted at each wave

Wave	Number of original core member interviews	Total number of interviews

1	11,392	12,100
2	8,780	9,432
3	7,535	9,771
4	6,623	11,050
5	6,242	10,274

Source: NatCen, 2012

Table 5.1 shows the number of original core member interviews conducted at each wave; these figures do not include new core members from the refreshment samples at waves 3 and 4. The total number of interviews includes the original core member interviews, core refreshment sample member interviews and partner interviews. The ELSA User Guide notes that the majority of non-response in waves 1 and 2 was due to refusal to participate; reasons for non-response are not reported for waves 3, 4 and 5 (NatCen, 2012).

Attempts were made by the interviewer to track core members who had moved, for example by speaking to neighbours and examining the electoral register. For wave 3, the Department for Work and Pensions was also involved in tracing movers through the pension database. In addition, for waves 3, 4 and 5, the National Health Service Central Register was also used (NatCen, 2012).

5.1.3 Weighting

The longitudinal weighting strategy focuses on the participants who have taken part in every wave up until the one used; this is 5,262 participants by wave 5. Each wave's longitudinal weight builds on the one from the previous wave. This means that the longitudinal weight adjusts for non-response to the HSE, from which the sample is drawn, and every wave of ELSA (Cheshire et al., 2012; NatCen, 2012).

The cohort weighting strategy adjusts for non-response. In addition, weighting is used to ensure that the sample accurately reflects the proportions of people in different age categories from 50 and over in the general population, according to the estimates from the Office for National Statistics (NatCen, 2012). As an extension to the cohort weights, a self-completion weight is available from wave 2. This weight builds on the cohort weight, based on respondents who completed their self-completion questionnaire, and it adjusts for non-response (NatCen, 2012).

For the longitudinal analysis, I have used the longitudinal weight for wave 5 as this is the most recent wave to be included in the analysis. For the cohort analysis, I have used the standard cohort weight for wave 1 (as this is the only cohort weight available) and the self-completion weight for the other waves. I chose to use the self-completion weight instead of the standard cohort weight, where possible, as the outcome variables for the analysis are included in the self-completion questionnaire. This means that it is crucial to account for additional non-response for the self-completion questionnaire.

5.1.4 Variable selection

The outcome variable of interest relates to self-perceived access to services. Respondents were asked, in the self-completion questionnaire, to rate the ease or difficulty of getting to a range of services (the 'everyday' services from the list are used in this research). In waves 1 and 2, respondents were asked, 'How easy or difficult would it be for you to get to each of the following places, using your usual form of transport?' and the 'everyday' services listed are the bank or cash point, Post Office, shopping centre, supermarket and local shops. This question was not asked in wave 3. In waves 4 and 5, respondents were asked, 'How easy or difficult is it for you to get to each of the following places using your usual forms of transport?' and the basic services listed are the bank or cash point, Post Office, shopping centre, medium or large supermarket and corner shop. There were slight changes to the wording of the question and two of the services between waves 1 and 2 and waves 4 and 5. Whilst this is not ideal, the question and services do seem to be addressing the same issues

and, for the purposes of this research, are being treated as similar enough to allow for longitudinal analysis.

A further issue with the wording of both versions of the question is that it refers to 'usual transport', which is difficult to ascertain from the other questions in ELSA. For example, participants were asked about their public transport use and whether they had access to a car, but neither of these questions is enough to suggest that the participant used one form of transport over another. This limits the exploration of access by usual transport; however, different transport options can be included in the analyses.

Possible predictor variables were chosen from the main and self-completion questionnaires based on concepts and issues in the literature and demographic information, which could explain variability in access to services (see appendix, table 10.3). These variables were chosen across waves and in advance of conducting any analyses to avoid the temptation of increasing the pool of variables when the literature does not support this. Some suitable variables were discounted due to low response rates or the variable not being present in every wave with the same or similar wording. In addition to these, a possible predictor variable was chosen from the financial derived variables dataset (equivalised household income) and a special access license was granted to include an urban/rural indicator (see appendix, table 10.3).

Alternative specifications of the models were estimated, however only predictor variables that had a significant association with the outcome (and affected the overall fit of the model) were included in the models reported throughout this chapter.

5.1.5 Ethics

Registration was required to access the ELSA datasets, including a statement of the purpose of use. The urban/rural indicator was available only with special access. The variable gives some indication about where a respondent might live, however this indicator is based on census output areas and had a low level of disclosivity (ELSA, n.d.). In order to be granted the special access for the

variable, a project outline was required and a justification of why the variable was being requested. The agreement ensured that only I had access to the variable and that it would only be held on a password protected computer system.

5.1.6 Limitations

There were two main limitations to the ELSA dataset for this project. Firstly, the self-perceived access variable was not completely consistent over the waves of data collection and was not asked in wave 3. This was not problematic for cohort analysis; however, it was potentially undesirable for longitudinal analysis. For the purposes of this project, and due to the differences being small, the variable has been considered similar across waves. In addition, this variable was in the self-completion questionnaire, which could mean lower response rates. To address this limitation, self-completion weights were used in the cohort analysis (where these were available) to adjust for non-response. However, there was no self-completion weight available for the longitudinal analysis.

Secondly, only around a quarter of the sample lived in a rural area. The small rural sample size meant that an exploration of rural older people was unfeasible on its own. As older people are overrepresented in rural areas (Defra, 2013a), this is a useful sub-group for analysis, it is therefore somewhat surprising that the sampling strategy does not allow for analysis of this sub-group. The comparatively lower proportion of rural older people in the sample may also affect the ability of ELSA to capture this factor in the experience of ageing.

5.2 Logistic Regression

5.2.1 Method

For the cohort analysis, I wanted to explore what predictor variables could help to explain the differences in the outcome variable of self-perceived access to services. This type of question and approach is suited to regression analysis. As the outcome variable is not continuous, the relationship between the

predictors and outcome variable cannot be linear. This means that a linear regression would not be appropriate (Menard, 2002; Pampel, 2000). An alternative regression technique, for non-linear relationships, is logistic regression. With this technique, the logit transformation is applied to create a linear relationship which estimates the changes in the logged odds of an event happening (Pampel, 2000).

The goodness-of-fit measure used for this analysis is R²L (also known as McFadden's R²). This is the measure advocated by Menard (2002) based on the similarity of the underlying concept to the R² used for linear regressions. The R²L calculates a value between zero and one to denote the reduction in the variation achieved through the predictor variables, where one suggests that the model has predicted all of the possible variation (Menard, 2002). This measure should only be used as a rough guide (Pampel, 2000). It is useful in model development, where the aim is to build a model that predicts the outcome using the fewest variables (Norušis, 2008).

The coefficients for each predictor are interpreted as the resulting change in the logged odds of the outcome variable of an increase of one unit of measurement in the predictor (Menard, 2002; Pampel, 2000). The logged odds, however, is not particularly useful for interpretation, so the coefficients are exponentiated to calculate the odds of the change (the odds ratio) (Menard, 2002; Pampel, 2000). Each predictor variable has its own test of significance, where strength can be interpreted with the traditional levels (Pampel, 2000).

As the scope of this project is focused on access to services by people aged 65 and over, this age restriction was placed on the ELSA dataset. This meant that only people aged 65 and over were included in the analysis and this restriction was used at each wave.

5.2.2 Results

Table 5.2 to table 5.6 show the frequencies of ELSA participants aged 65 or over reporting ease or difficulty access the different services across the waves.

Table 5.2 Whether ELSA participants find it easy or difficult getting to the bank or cash point by wave

How participants find getting to the bank or cash point	Wave 1	Wave 2	Wave 4	Wave 5
Easy	4109 (89.40%)	3,441 (92.15%)	3,727 (91.35%)	4,045 (91.64%)
Difficult	487 (10.60%)	293 (7.85%)	353 (8.65%)	369 (8.36%)
Total	4,596 (100%)	3,734 (100%)	4,080 (100%)	4,414 (100%)

Table 5.2 suggests that there has been a slight increase across waves in the proportion of participants who find it easy getting to the bank or cash point. Wave 1 had the highest, and wave 2 had the lowest percentage of participants who found it difficult getting to the bank or cash point.

Table 5.3 Whether ELSA participants find it easy or difficult getting to the local shops (waves 1 and 2) or corner shop (waves 4 and 5) by wave

How participants find getting to the local shops/corner shop	Wave 1	Wave 2	Wave 4	Wave 5
Easy	4,309 (91.54%)	3,604 (93.51%)	3,369 (89.91%)	3,687 (91.01%)

Difficult	398	250	378	364
	(8.46%)	(6.49%)	(10.09%)	(8.99%)
Total	4,707	3,854	3,747	4,051
	(100%)	(100%)	(100%)	(100%)

Looking at table 5.3 and at waves 1 and 5 there appears to be little change in how easy or difficult people find getting to the local shops/corner shops over successive waves. Waves 2 and 4, however, suggest that access to these facilities may be more fluid; wave 2 has the highest proportion of participants finding it easy to get to the local shops and wave 4 has the lowest proportion reporting that this is easy.

Table 5.4 Whether ELSA participants find it easy or difficult getting to the Post Office by wave

How participants find getting to the Post Office	Wave 1	Wave 2	Wave 4	Wave 5
Easy	4,419	3,618	3,711	4,030
	(92.78%)	(93.06%)	(90.07%)	(90.91%)
Difficult	344	270	409	403
	(7.22%)	(6.94%)	(9.93%)	(9.09%)
Total	4,763	3,888	4,120	4,433
	(100%)	(100%)	(100%)	(100%)

Table 5.4 suggests that there has been a slight decline in participants' access to Post Offices across waves. Wave 2 has the highest proportion of participants reporting it easy getting to the Post Office whereas wave 4 has the lowest proportion of participants finding it easy.

Table 5.5 Whether ELSA participants find it easy or difficult getting to the shopping centre by wave

How participants find getting to the shopping centre	Wave 1	Wave 2	Wave 4	Wave 5
Easy	4,121 (88.43%)	3,374 (89.93%)	3,276 (85.14%)	3,558 (85.08%)
Difficult	539 (11.57%)	378 (10.07%)	572 (14.86%)	624 (14.92%)
Total	4,660 (100%)	3,752 (100%)	3,848 (100%)	4,182 (100%)

It appears from table 5.5 that across waves, participants are more likely to find it difficult getting to the shopping centre. Wave 2 had the lowest proportion of participants reporting finding it difficult getting to the shopping centre and wave 5 has the highest proportion of participants experiencing difficulty.

Table 5.6 Whether ELSA participants find it easy or difficult getting to the supermarket (waves 1 and 2) or medium or large supermarket (waves 4 and 5) by wave

How participants find getting to the supermarket	Wave 1	Wave 2	Wave 4	Wave 5
Easy	4235	3,541	3,755	4,033
	(89.36%)	(91.48%)	(90.29%)	(90.43%)
Difficult	504	330	404	427
	(10.64%)	(8.52%)	(9.71%)	(9.57%)
Total	4,739	3,871	4,159	4,460
	(100%)	(100%)	(100%)	(100%)

Access to the supermarket seems to be stable over successive waves for participants (table 5.6). There is little difference between the proportions of participants who found getting to the supermarket easy in wave 1 and wave 5. Wave 2 has the highest proportion of participants finding the supermarket easy to access.

Table 5.17 to table 5.11 show the logistic regression models for each wave by service type. These models predict participants aged 65 or over finding it difficult getting to the service.

5.2.2.1 Banks and cash points

Table 5.7 Logistic regression model predicting participants finding it difficult getting to the bank or cash point by wave

Predictor variable	Wave 1			Wave 2			Wave 4			Wave 5		
	β	SE β	e β	β	SE β	e β	β	SE β	e β	β	SE β	e β
Participant having much difficulty or being unable to walk ¼ mile unaided (base group = no difficulty or some difficulty)	1.72 ***	0.14	5.60	1.67 ***	0.17	5.33	1.49 ***	0.18	4.43	1.62 ***	0.17	5.07
Participant having a long-standing and limiting illness or disability (base group = not having a long-standing and limiting illness or disability)	0.57 ***	0.14	1.77	0.64 ***	0.17	1.89	0.65 ***	0.18	1.92	0.57 ***	0.17	1.77
Participant not having the use of a car or van when needed (base group = having the use of a car or van when needed)	0.97 ***	0.13	2.63	1.00 ***	0.17	2.71	1.27 ***	0.17	3.58	0.93 ***	0.16	2.54
Participant never using public transport (base group = uses public transport)	0.99 ***	0.13	2.70	0.92 ***	0.16	2.51	1.02 ***	0.16	2.76	0.98 ***	0.15	2.65
Participant does not use the Internet or email (base group = does use the Internet and/or email)	-	-	-	0.46 *	0.22	1.58	0.38 *	0.18	1.46	0.64 ***	0.18	1.90
Participant lives in a rural area (base group = lives in an urban area)	-	-	-	-	-	-	0.52 ***	0.16	1.68	-	-	-
Increase in log total equivalised weekly income (£)	-0.33 ***	0.09	0.72	-	-	-	-	-	-	0.36 **	0.13	0.70
Participant is female (base group = participant is male)	-	-	-	-	-	-	0.34 *	0.16	1.41	0.44 **	0.15	1.56
Participant being aged 75-84 years (base group = being aged 65-74)	0.66 ***	0.13	1.93	0.39 **	0.16	1.47	0.39 *	0.16	1.47	0.18	0.15	1.19
Participant being aged 85 or over (base group = being aged 65-74)	1.40 ***	0.17	4.05	1.22 ***	0.22	3.40	0.94 ***	0.21	2.55	0.90 ***	0.19	2.45
Constant	-2.64	0.50	0.07	-4.79	0.24	0.01	-6.57	0.35	0.00	-4.32	0.87	0.01

Note: Wave 1 $R^2L = 0.30$, $N = 4,526$, Wave 2 $R^2L = 0.27$, $N = 3,689$, Wave 4 $R^2L = 0.30$, $N = 3,885$, Wave 5 $R^2L = 0.30$, $N = 4,185$.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Bold denotes the predictors with the greatest effect sizes for each wave.

From looking at the exponential of the coefficients (the columns labelled $e\beta$ in the table), it is clear that in every wave the predictor with the largest effect on access to banks or cash points was participant difficulty walking a quarter of a mile unaided. This analysis takes into account all of the other predictors in the model, meaning that we are seeing the true effect of limited mobility.

Participants who had much difficulty walking a quarter of a mile on their own or were unable to do so were more likely to find it difficult getting to the bank or cash point than participants who had no, or some, difficulty walking. This increase was between 4.43 (95 per cent CI, 3.10 to 6.33) times in wave 4, and 5.60 (95 per cent CI, 4.21 to 7.43) times more likely in wave 5.

In waves 1 and 2 the predictor with the second largest effect size on access to banks or cash points was linked to being older. Participants aged 85 or over were 4.05 (with a 95 per cent confidence interval of 2.88 to 5.69) in wave 1 or 3.40 (with a 95 per cent confidence interval of between 2.20 and 5.27) in wave 2, times more likely to find it difficult getting to the bank or cash point than participants aged between 65 and 74. In waves 4 and 5 the predictors with the second largest effect sizes on access to banks or cash points were linked to transport. In wave 4, participants who did not have the use of a car or van (either as the driver or passenger) when needed were 3.58 (with a 95 per cent confidence interval of 2.58 to 4.96) times more likely to find it difficult getting to the bank or cash point, compared to participants who did have the use of a car or van. In wave 5, participants who never used public transport were 2.65 (with a 95 per cent confidence interval of between 1.98 and 3.55) times more likely to find it difficult getting to the bank or cash point than participants who did use public transport (even if this was only rarely).

5.2.2.2 Local shops

Table 5.8 Logistic regression model predicting participants finding it difficult getting to the local shops (waves 1 and 2) and corner shop (waves 4 and 5) by wave

Predictor variable	Wave 1			Wave 2			Wave 4			Wave 5		
	β	SE β	e β	β	SE β	e β	β	SE β	e β	β	SE β	e β
Participant having much difficulty or being unable to walk ¼ mile unaided (base group = no difficulty or some difficulty)	1.88 ***	0.17	6.56	1.98 ***	0.19	7.22	1.46 ***	0.16	4.29	1.46 ***	0.15	4.31
Participant having a long-standing and limiting illness or disability (base group = not having a long-standing and limiting illness or disability)	0.77 ***	0.17	2.17	0.76 ***	0.19	2.14	0.51 ***	0.16	1.67	0.55 ***	0.16	1.73
Participant not having the use of a car or van when needed (base group = having the use of a car or van when needed)	1.10 ***	0.14	3.00	1.10 ***	0.17	3.01	1.10 ***	0.15	3.01	0.60 ***	0.15	1.81
Participant never using public transport (base group = uses public transport)	1.27 ***	0.14	3.56	0.84 ***	0.18	2.32	0.93 ***	0.14	2.52	0.86 ***	0.13	2.37
Participant lives in a rural area (base group = lives in an urban area)	-	-	-	-	-	-	0.37 **	0.15	1.45	-	-	-
Increase in log total equivalised weekly income (£)	-0.22 *	0.11	0.81	-	-	-	-	-	-	-	-	-
Participant is female (base group = participant is male)	-	-	-	0.42 **	0.16	1.52	-	-	-	0.46 ***	0.13	1.58
Participant being aged 75-84 years (base group = being aged 65-74)	0.49 ***	0.14	1.64	0.44 **	0.17	1.55	0.34 *	0.15	1.41	0.40 **	0.14	1.49
Participant being aged 85 or over (base group = being aged 65-74)	1.23 ***	0.19	3.43	1.19 ***	0.24	3.27	0.71 ***	0.19	2.03	0.89 ***	0.19	2.43
Constant	-3.91	0.56	0.02	-5.65	0.33	0.00	-4.96	0.25	0.01	-5.18	0.32	0.01

Note: Wave 1 R²L = 0.34, N = 4,636, Wave 2 R²L = 0.31, N = 3,830, Wave 4 R²L = 0.24, N = 3,572, Wave 5 R²L = 0.21, N = 3,892.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Bold denotes the predictors with the greatest effect sizes for each wave.

Across all waves, the predictor with the largest effect size on access to local or corner shops was how difficult participants found walking a quarter of a mile unaided. Participants who had much difficulty or were unable to walk this far on their own, were in wave 2 up to 7.22 (95 per cent CI, 4.96 to 10.51) times more likely to find it difficult getting to the local shops or corner shop than participants who reported no or some difficulty walking this far. This takes the other predictors in the model into account.

In wave 1, predictors with large effect sizes in the model also included the participants' use of public transport and age. Participants who never used public transport were 3.56 (95 per cent CI, 2.68 and 4.72) times more likely to find it difficult getting to the local shops compared to participants who did use public transport. Participants aged 85 or over were 3.43 (95 per cent CI, 2.35 and 5.02) times more likely to find access to local and corner shops difficult than participants aged 65 to 74.

In wave 2, participants' use of a car and age had large effects on access to local shops, in addition to walking ability. Participants who did not have the use of a car or van (either as a passenger or driver) when needed were 3.01 (95 per cent CI, 2.15 and 4.22) times more likely to find it difficult getting to the local shops than participants who did have a car or van. In addition, participants aged 85 or over were 3.27 (95 per cent CI, 2.06 and 5.21) times more likely to find it difficult compared to participants aged 65 to 74.

Whether participants had the use of a car when needed was the predictor with the second largest effect on access difficulties in wave 4. Participants who did not have the use of a car when needed were 3.01 (95 per cent CI, 2.22 and 4.07) times more likely to find it difficult getting to the corner shop compared to participants who did have the use of a car or van. In addition, participants who never used public transport were 2.52 (95 per cent CI, 1.90 and 3.35) times more likely to find it difficult getting to the corner shop than participants who did use public transport.

In wave 5, age was the predictor with the second largest effect size on access to corner shops. Participants aged 85 or over were 2.43 (95 per cent CI, 1.66 to 3.55) times more likely to find it difficult getting to the corner shop than participants aged 65 to 74. A similar effect size was also found for participants' public transport use; participants who never used public transport were 2.37 (95 per cent CI, 1.82 and 3.08) times more likely to find it difficult getting to the local shops than participants who did use public transport.

It is worth noting that the change of wording of the access question (from local shops to corner shops) may have led participants to interpret the question differently. Whilst participant walking difficulty was the variable with the largest effect size across all waves, the magnitude of the effect is similar for waves 1 and 2 (local shops) and then drops and is similar for waves 4 and 5 (corner shop). In addition, the measure of model fit suggests a difference between waves 2 and 4 as the model explains less of the variance when the question was 'corner shop' than when it was for 'local shops'. These hints that local shops and corner shops were not being viewed in the same way by participants could be problematic for longitudinal analysis.

5.2.2.3 Post office

Table 5.9 Logistic regression model predicting participants finding it difficult getting to the Post Office by wave

Predictor variable	Wave 1			Wave 2			Wave 4			Wave 5		
	β	SE β	e β	β	SE β	e β	β	SE β	e β	β	SE β	e β
Participant having much difficulty or being unable to walk ¼ mile unaided (base group = no difficulty or some difficulty)	1.98 ***	0.18	7.22	1.81 ***	0.17	6.12	1.40 ***	0.16	4.07	1.40 ***	0.15	4.07
Participant having a long-standing and limiting illness or disability (base group = not having a long-standing and limiting illness or disability)	0.84 ***	0.18	2.32	0.43 **	0.17	1.54	0.62 ***	0.16	1.86	0.33 *	0.15	1.39
Participant not having the use of a car or van when needed (base group = having the use of a car or van when needed)	0.72 ***	0.15	2.06	0.84 ***	0.17	2.31	0.95 ***	0.15	2.58	0.68 ***	0.15	1.96
Participant never using public transport (base group = uses public transport)	1.14 ***	0.15	3.14	0.80 ***	0.16	2.22	0.83 ***	0.14	2.30	0.84 ***	0.13	2.32
Participant does not use the Internet or email (base group = does use the Internet and/or email)	-	-	-	-	-	-	-	-	-	0.37 *	0.15	1.45
Participant lives in an urban area (base group = lives in a rural area)	-	-	-	0.49 **	0.19	1.63	-	-	-	-	-	-
Increase in log total equivalised weekly income (£)	-0.30 **	0.10	0.74	-0.27 *	0.13	0.76	-	-	-	-	-	-
Participant is female (base group = participant is male)	0.49 ***	0.14	1.63	-	-	-	0.37 **	0.14	1.45	0.41 **	0.13	1.50
Participant being aged 75-84 years (base group = being aged 65-74)	0.59 ***	0.15	1.81	0.25	0.16	1.28	0.44 **	0.14	1.55	0.37 **	0.14	1.45
Participant being aged 85 or over (base group = being aged 65-74)	1.30 ***	0.20	3.66	1.14 ***	0.22	3.13	0.98 ***	0.19	2.67	1.04 ***	0.19	2.82
Constant	-4.48	0.62	0.11	-3.32	0.71	0.36	-5.39	0.31	0.00	-5.30	0.32	0.00

Note: Wave 1 R2L = 0.34, N = 4,693, Wave 2 R2L = 0.25, N = 3,827, Wave 4 R2L = 0.24, N = 3,922, Wave 5 R2L = 0.22, N = 4,252.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Bold denotes the predictors with the greatest effect sizes for each wave.

For all of the waves, taking into account all of the predictors in the models, the predictor with the largest effect size on access to Post Offices was the participants' walking ability. Participants who had much difficulty walking a quarter of a mile unaided (or were unable) were more likely to find it difficult getting to the Post Office than participants who had no or some difficulty walking this far. The increase in likelihood of finding access difficult was estimated at between 4.07 times in waves 4 and 5 (95 per cent CI, 2.96 and 5.61 in wave 4 and 3.00 and 5.51 in wave 5) and 7.22 (95 per cent CI, 5.10 and 10.23) times in wave 1.

In each wave, the predictor with the second largest effect size on access to Post Offices was age; participants aged 85 or over were more likely to find it difficult getting to the Post Office than participants aged 65 to 74. The increased likelihood was between 2.67 times in wave 4 (95 per cent CI, 1.84 and 3.87) and 3.66 times in wave 1 (95 per cent CI, 2.47 and 5.40) compared to those aged 65 to 74.

Where participants live is a significant factor in the model for wave 2; here, participants who lived in an urban area were more likely to find it difficult getting to the post office than participants who lived in a rural area.

5.2.2.4 Shopping centres

Table 5.10 Logistic regression model predicting participants finding it difficult getting to the shopping centre by wave

Predictor variable	Wave 1			Wave 2			Wave 4			Wave 5		
	β	SE β	$e\beta$	β	SE β	$e\beta$	β	SE β	$e\beta$	β	SE β	$e\beta$
Participant having much difficulty or being unable to walk $\frac{1}{4}$ mile unaided (base group = no difficulty or some difficulty)	1.54 ***	0.13	4.67	1.56 ***	0.15	4.75	1.38 ***	0.14	3.99	1.21 ***	0.13	3.35
Participant having a long-standing and limiting illness or disability (base group = not having a long-standing and limiting illness or disability)	0.73 ***	0.13	2.09	0.51 ***	0.14	1.66	0.67 ***	0.13	1.94	0.50 ***	0.12	1.64
Participant not having the use of a car or van when needed (base group = having the use of a car or van when needed)	1.11 ***	0.12	3.03	1.17 ***	0.15	3.24	1.12 ***	0.13	3.06	0.82 ***	0.13	2.26
Participant never using public transport (base group = uses public transport)	0.80 ***	0.12	2.24	0.72 ***	0.14	2.06	0.50 ***	0.12	1.65	0.50 ***	0.11	1.64
Participant does not use the Internet or email (base group = does use the Internet and/or email)	0.45 *	0.20	1.57	0.40 *	0.18	1.50	-	-	-	0.24 *	0.12	1.28
Participant lives in a rural area (base group = lives in an urban area)	0.42 ***	0.13	1.52	0.31 *	0.15	1.37	0.45 ***	0.12	1.56	0.47 ***	0.12	1.60
Increase in log total equivalised weekly income (£)	-	-	-	-	-	-	-	-	-	-0.26 **	0.10	0.77
Participant is female (base group = participant is male)	0.42 ***	0.11	1.53	0.48 ***	0.13	1.61	-	-	-	0.39 ***	0.11	1.47
Participant being aged 75-84 years (base group = being aged 65-74)	0.38 ***	0.12	1.46	0.29 *	0.14	1.34	0.25 *	0.12	1.28	0.22	0.11	1.24
Participant being aged 85 or over (base group = being aged 65-74)	1.00 ***	0.17	2.73	1.03 ***	0.20	2.81	1.00 ***	0.19	2.73	0.89 ***	0.17	2.43
Constant	-5.16	0.28	0.01	-5.01	0.29	0.01	-4.30	0.20	0.01	-3.13	0.66	0.04

Note: Wave 1 $R^2L = 0.27$, $N = 4,607$, Wave 2 $R^2L = 0.24$, $N = 3,706$, Wave 4 $R^2L = 0.25$, $N = 3,671$, Wave 5 $R^2L = 0.19$, $N = 3,968$.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Bold denotes the predictors with the greatest effect sizes for each wave.

In each wave, controlling for all of the predictors in the models, the predictor with the largest effect on access to shopping centres was participants' walking difficulty. Participants who had much difficulty walking a quarter of a mile on their own (or were unable) were more likely to find it difficult getting to the shopping centre than those who had no or some difficulty walking this far. The increased likelihood in finding access difficulty was between 3.35 times (in wave 5, 95 per cent CI, 2.59 and 4.33) and 4.75 times (in wave 2, 95 per cent CI, 3.55 and 6.35) that of people with no or some walking difficulty.

The second largest effects on access to shopping centres were found, across all waves, to be use of a car and age. Participants who did not have the use of a car or van when needed were more likely to find it difficult getting to the shopping centre than participants who did have the use of a car. The magnitude of this effect ranged from 2.26 times greater (in wave 5, 95 per cent CI, 1.75 and 2.92) and 3.24 times greater (in wave 2, 95 per cent CI, 2.43 and 4.32). In addition, participants aged 85 or over were between 2.43 (wave 5, 95 per cent CI, 1.73 and 3.42) and 2.81 (wave 2, 95 per cent CI, 1.91 and 4.13) times more likely to find it difficult getting to the shopping centre than participants aged 65 to 74.

5.2.2.5 Supermarkets

Table 5.11 Logistic regression model predicting participants finding it difficult getting to the supermarket by wave

Predictor variable	Wave 1			Wave 2			Wave 4			Wave 5		
	β	SE β	e β	β	SE β	e β	β	SE β	e β	β	SE β	e β
Participant having much difficulty or being unable to walk ¼ mile unaided (base group = no difficulty or some difficulty)	1.47 ***	0.14	4.36	1.53 ***	0.16	4.63	1.33 ***	0.16	3.79	1.31 ***	0.15	3.72
Participant having a long-standing and limiting illness or disability (base group = not having a long-standing and limiting illness or disability)	0.81 ***	0.14	2.25	0.74 ***	0.16	2.10	0.86 ***	0.16	2.36	0.58 ***	0.15	1.79
Participant not having the use of a car or van when needed (base group = having the use of a car or van when needed)	1.17 ***	0.12	3.21	1.12 ***	0.15	3.05	1.28 ***	0.15	3.60	1.03 ***	0.15	2.81
Participant never using public transport (base group = uses public transport)	0.85 ***	0.13	2.34	0.54 ***	0.16	1.72	0.53 ***	0.15	1.70	0.80 ***	0.14	2.32
Participant does not use the Internet or email (base group = does use the Internet and/or email)	-	-	-	0.59 **	0.22	1.80	0.49 **	0.17	1.64	0.82 ***	0.16	2.27
Participant lives in a rural area (base group = lives in an urban area)	-	-	-	-	-	-	0.31 *	0.15	1.37	-	-	-
Increase in log total equivalised weekly income (£)	-0.29 **	0.09	0.75	-0.29 *	0.13	0.75	-	-	-	-	-	-
Participant is female (base group = participant is male)	0.43 ***	0.12	1.54	0.49 ***	0.14	1.64	-	-	-	0.57 ***	0.14	1.78
Participant being aged 75-84 years (base group = being aged 65-74)	0.54 ***	0.12	1.72	0.28	0.15	1.32	0.21	0.15	1.23	0.30 *	0.14	1.35
Participant being aged 85 or over (base group = being aged 65-74)	1.35 ***	0.18	3.85	1.16 ***	0.21	3.18	0.79 ***	0.20	2.20	0.89 ***	0.19	2.44
Constant	-3.54	0.54	0.03	-3.94	0.76	0.02	-5.60	0.25	0.00	-6.39	0.34	0.00

*Note: Wave 1 R2L = 0.29, N = 4,667, Wave 2 R2L = 0.26, N = 3,789, Wave 4 R2L = 0.25, N = 3,949, Wave 5 R2L = 0.26, N = 4,279. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Bold denotes the predictors with the greatest effect sizes for each wave.*

Across all of the waves, taking into account all of the predictors in the models, the predictor with the largest effect size on access to supermarkets was the walking difficulty of participants. Participants who were unable, or had much difficulty, walking a quarter of a mile on their own were more likely to find it difficult getting to the supermarket than participants who had no or some difficulty walking this far. The magnitude of this effect is an increased likelihood of between 3.72 (95 per cent confidence interval between 2.75 and 5.04) times more likely in wave 5 and 4.63 (95 per cent confidence interval of 3.37 to 6.37) times more likely in wave 2 to find access difficult.

In waves 1 and 2, the predictor with the second largest effect size on access to supermarkets was age. Participants aged 85 or over were between 3.18 (wave 2, 95 per cent CI, 2.11 to 4.79) and 3.85 (wave 1, 95 per cent CI, 2.73 to 5.43) times more likely to find it difficult getting to the supermarket than participants aged 65-74. In waves 4 and 5, the participants' use of a car was the variable with the second largest effect on access to supermarkets. Participants who did not have the use of a car when needed were more likely to find it difficult getting to the supermarket than participants who did have the use of a car when needed. The size of this effect varied between 2.81 (95 per cent CI, 2.11 to 3.75) times more likely (wave 5) and 3.60 (95 per cent CI, 2.69 to 4.83) times more likely to find access difficult (wave 4).

A summary of the findings, the predictors with the largest effects of access to different services, is represented in table 5.12.

Table 5.12 Summary of predictors with the largest effects on difficulty access services, across services types and waves

Type of service	Wave 1		Wave 2		Wave 4		Wave 5	
	Largest effect	Second largest effect(s)	Largest effect	Second largest effect(s)	Largest effect	Second largest effect(s)	Largest effect	Second largest effect(s)
Banks and cash points	Difficulty walking $\frac{1}{4}$ mile	Being 85 or over	Difficulty walking $\frac{1}{4}$ mile	Being 85 or over	Difficulty walking $\frac{1}{4}$ mile	Not having a car	Difficulty walking $\frac{1}{4}$ mile	Not using public transport
Local shops	Difficulty walking $\frac{1}{4}$ mile	Not using public transport <i>Being 85 or over</i>	Difficulty walking $\frac{1}{4}$ mile	Being 85 or over <i>Not having a car</i>	Difficulty walking $\frac{1}{4}$ mile	Not having a car <i>Not using public transport</i>	Difficulty walking $\frac{1}{4}$ mile	Being 85 or over <i>Not using public transport</i>
Post offices	Difficulty walking $\frac{1}{4}$ mile	Being 85 or over	Difficulty walking $\frac{1}{4}$ mile	Being 85 or over	Difficulty walking $\frac{1}{4}$ mile	Being 85 or over	Difficulty walking $\frac{1}{4}$ mile	Being 85 or over
Shopping centres	Difficulty walking $\frac{1}{4}$ mile	Not having a car <i>Being 85 or over</i>	Difficulty walking $\frac{1}{4}$ mile	Not having a car <i>Being 85 or over</i>	Difficulty walking $\frac{1}{4}$ mile	Not having a car <i>Being 85 or over</i>	Difficulty walking $\frac{1}{4}$ mile	Being 85 or over <i>Not having a car</i>
Supermarkets	Difficulty walking $\frac{1}{4}$ mile	Being 85 or over	Difficulty walking $\frac{1}{4}$ mile	Being 85 or over	Difficulty walking $\frac{1}{4}$ mile	Not having a car	Difficulty walking $\frac{1}{4}$ mile	Not having a car

5.3 Event History Analysis

5.3.1 Method

Event history analysis (EHA) presents an appropriate range of techniques for addressing the question of what could explain the variation in the time it takes for older people to start to find access to services more difficult.

The EHA conducted for this project was in discrete-time (as opposed to continuous time). Discrete-time is used when time is measured imprecisely, usually with few time points measured (Menard, 2010; Rabe-Hesketh and Skrondal, 2008). As respondents in the ELSA survey were interviewed in two-yearly waves and there were only four waves that could be included in the analysis, this fits with discrete-time approaches.

EHA techniques are based on the time individuals are 'at risk'; the time between one event and another occurring (Rabe-Hesketh and Skrondal, 2008). In the case of this project, the initial event was being 65 at wave 1 of ELSA or wave 1 being the first data collection point (if the person was already over 65 at wave 1). The event modelled was the first time the person rated their access to a service as more difficult. This approach has the benefit of examining all possible decreases in access from an individuals' perception of access at the baseline (wave 1), for example from finding access 'very easy' in wave 1 to 'easy' in wave 2. The limitation, however, is that the analysis focuses only on the first time a decrease in access is noted, while access could be a fluid issue. Choosing to focus on the first occurrence is a valid methodological decision (see Allison, 1984) because it is consistent with the question the EHA is aiming to answer in this project, that is, what factors that are associated with starting to find access to services more difficult.

In EHA, the hazard is calculated based on the time an individual is 'at risk' of a change in the status of interest. The hazard is the probability that the change of interest (starting to find access more difficult) will happen at a particular time point, on the basis that it has not already happened (Menard, 2010; Rabe-Hesketh and Skrondal, 2008; Singer and Willett, 1993; Allison, 1984). As the

hazard is calculated based on the number of people who are yet to find access more difficult, which is likely to decrease over time, it is possible for the hazard to be greater at later time points even if the number of people experiencing a decrease in access is smaller than at earlier time points (Allison, 1984).

A benefit of EHA is its approach to censoring. Censoring occurs when you cannot know for exactly how long someone is at risk (Rabe-Hesketh and Skrondal, 2008, Singer and Willett, 1993). This incomplete information could be because the individual has not found access more difficult in the time points available or because of attrition, for example. Alternatively, an exact time at risk may not be known because of an imprecise time measurement; this is called 'interval censoring' (Rabe-Hesketh and Skrondal, 2008). Interval censoring occurs in this project as a decrease in access can be measured only at the interview date, while the individual may have experienced the decrease at any time between waves. The EHA approach to censoring means that these individuals still contribute what is known about them to the model, rather than having to treat the information as missing (Allison, 1984). Thus, the available data are used as fully as possible in the model.

The format of the dataset required for EHA is different from the format provided by ELSA so extensive data manipulation was needed (see Jenkins, 2008 for instructions). EHA requires an expanded dataset so that there is a row of data for each person, at each time point that they are still at risk. An event variable needs to be created which is 0 until the time point that the event occurs, when it becomes 1 (Rabe-Hesketh and Skrondal, 2008; Singer and Willett, 1993; Jenkins, 2008). This expanded dataset should therefore consist of an individual identifier and variables for time and the event. Predictor variables can also be included; for this project, all of the predictors are from the baseline (wave 1) and have been chosen from the range outlined in table 10.3 (appendix). The decision to choose a variable for possible inclusion in the models was based on the appropriateness of the question to elicit relevant responses for the analysis and response rates.

The time variable was created using the dates of participant interviews. This approach was chosen over the wave number as interviews were carried out over a year for each wave, so participants could be interviewed at irregular intervals, depending on when they were interviewed in each data collection phase. This date was then rounded up to create a year of interview; due to rounding up, this year is not necessarily the same as the reported year of data collection. The decision was made to round up every date, as opposed to rounding to the nearest whole year, as this made for a more even spread of the data (which is preferable for this technique).

Complementary log-log (cloglog) models were used for estimation and are based on the assumption of proportional hazards (Singer and Willett, 2003), which means that they explore the effect of the predictor variables on the hazard (Rabe-Hesketh and Skrondal, 2008). This type of model, and its associated assumptions, is preferable when the event happens in continuous time but the measurement is in discrete-time (Singer and Willett, 2003; Rabe-Hesketh and Skrondal, 2008), due to the similarity between the complementary log-log approach and those used for the analysis of continuous time data (Singer and Willett, 2003). This makes it suitable for the ELSA data as individuals may notice their decreased levels of access to services at any time, but this is measured only when they are interviewed for the next wave. This project uses a semi-parametric design of the cloglog, as events do not happen at every time point (no events are recorded at the time points associated with wave 3 as the question was not asked). As a solution, time points are grouped together and it is assumed that the hazard is constant over these longer periods of time (Jenkins, 2008). This is the approach taken here, the time points associated with data collection for wave 1 are grouped together, data collection time points for waves 2 and 3 are grouped together, time points for data collection at wave 4 are grouped and time points for data collection at wave 5 are grouped.

All analysis was carried out using StataSE 12.

5.3.2 Results

5.3.2.1 *Bank and cash points*

Table 5.13 Years and waves that 4,307 ELSA sample members, aged 65 and over, experienced a reduced level of access to banks or cash points

Year	Associated ELSA wave	The number of ELSA sample members who			Proportion of ELSA sample members who		The probability that the ELSA sample members would experience a reduced level of access to banks or cash points this year (hazard)
		Remained in the sample at the beginning of the year	Experienced a reduced level of access to banks or cash points	Were censored by the end of this year	Continued to have the same level of access to banks or cash points	Experienced a reduced level of access to banks or cash points (cumulative)	
2005	2	4,307	179	628	0.96	0.04	0.04
2006	2	3,500	98	450	0.93	0.07	0.03
2009	4	2,952	318	259	0.83	0.17	0.11
2010	4	2,375	120	151	0.79	0.21	0.05
2011	5	2,104	423	1,130	0.63	0.37	0.20
2012	5	551	146	405	0.46	0.54	0.27

Note: The years have been rounded up so do not necessarily reflect the recorded dates of data collection for ELSA, but are still linked.

Overall, it appears that the numbers of ELSA sample members who experienced a reduced level of access to the bank or cash points increased over time. The first year of each wave has a greater number of people reporting a reduced level of access, due to a greater number of interviews being carried out in the first year of data collection. The first year of the fifth wave shows a peak of 423 ELSA sample members reporting reduced access and wave 5 overall has the most people reporting this for the first time. The hazard increases over time, both as a result of more sample members reporting reduced access and the sample pool reducing. Table 5.13 suggests that, after five waves of data, fewer than half of the sample members have continued to have the same level of access to banks or cash points as they reported in the first wave. This was determined by comparing the sum of wave 5 (2011 and 2012) with the sum of wave 2 (2005 and 2006).

Table 5.14 Discrete-time (piecewise constant) event history model predicting ELSA sample participants experiencing a reduced level of access to the bank or cash point from baseline

Predictor variable	β	SE β	e β
Time period 1 (Wave 2)	-6.23	0.27	0.00

Time period 2 (Wave 4)	-2.49	0.96	0.08

Time period 3 (Wave 5)	-1.41	0.88	0.25

Participant feels their age prevents them from doing what they would like, at least not often (base group =	0.21	0.92	1.24
	*		

participant never feels this)

Wald Chi2 (4) = 2869.02, $p < 0.001$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

From this model, the time predictors suggest that the estimated hazard of the sample participants experiencing a reduced level of access to banks or cash points increases over time, with the greatest increase occurring between waves 2 and 4. In addition, the estimated hazard (see column labelled $e\beta$) of participants finding access more difficult than they reported at wave 1 increases by 24 per cent (95 per cent confidence interval of 1.03 to 1.48) for those who feel that their age prevents them from doing what they would like compared to participants who never feel like this.

5.3.2.2 Local shops

Table 5.15 Years and waves that 4,307 ELSA sample members, aged 65 and over, experienced a reduced level of access to local shops (waves 1 and 2) and corner shops (waves 4 and 5)

Year	Associated ELSA wave	The number of ELSA sample members who			Proportion of ELSA sample members who		The probability that the ELSA sample members would experience a reduced level of access to local/corner shops (hazard)
		Remained in the sample at the beginning of the year	Experienced a reduced level of access to local/corner shops	Were censored by the end of this year	Continued to have the same level of access to local/corner shops	Experienced a reduced level of access to local/corner shops (cumulative)	
2005	2	4,307	203	605	0.95	0.05	0.05
2006	2	3,499	116	435	0.92	0.08	0.33
2009	4	2,948	276	265	0.84	0.17	0.94
2010	4	2,407	112	159	0.80	0.20	0.47
2011	5	2,136	405	1,182	0.65	0.35	0.19
2012	5	549	129	420	0.49	0.51	0.24

Note: The years have been rounded up so do not necessarily reflect the recorded dates of data collection for ELSA, but are still linked.

When looking at the numbers of ELSA sample members who experienced a reduction in their level of access to shops by wave (table 5.15), there appears to be a consistency across waves 2 and 4 and then an increase over wave 5. By the end of wave 5, around half of the ELSA sample members continued to have the same level of access to shops as they reported at wave 1. The hazard increases over time, but not monotonically as there are some years where the hazard dips or is greater than the years before and after.

Table 5.16 Discrete-time (piecewise constant) event history model predicting ELSA sample participants experiencing a reduced level of access to local shops (waves 1 and 2) and corner shops (waves 4 and 5)

Predictor variable	β	SE β	e β
Time period 1 (Wave 2)	-6.08	0.21	0.00

Time period 2 (Wave 4)	-2.77	0.10	0.06

Time period 3 (Wave 5)	-1.63	0.97	0.20

Participant having a long-standing and limiting illness or disability (base group = not having a long-standing and limiting illness or disability)	0.22	0.08	1.25
	**		
Participant feels their age prevents them from doing what they would like, at least not often (base group = participant never feels this)	0.31	0.10	1.37
	**		

Wald Chi2 (5) = 3194.66, $p < 0.001$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

In table 5.16, the time period predictors show an increase in the estimated hazard over time, suggesting that ELSA sample members were more likely to experience decreased access to shops over time. Participants with a long-standing and limiting illness or disability had a 1.25 increase (95 per cent confidence interval of between 1.07 and 1.45) in the estimated hazard of poorer access. Participants who felt that their age prevented them from doing what they would like had a 37 per cent increase (95 per cent confidence interval of 12 and 67 per cent increase) in the estimated hazard of reporting a decreased level of access to shops compared to participants who never felt this way.

5.3.2.3 Post Offices

Table 5.17 Years and waves that 4,307 ELSA sample members, aged 65 and over, experienced a reduced level of access to Post Offices

Year	Associated ELSA wave	The number of ELSA sample members who			Proportion of ELSA sample members who		The probability that the ELSA sample members would experience a reduced level of access to Post Offices (hazard)
		Remained in the sample at the beginning of the year	Experienced a reduced level of access to Post Offices	Were censored by the end of this year	Continued to have the same level of access to Post Offices	Experienced a reduced level of access to Post Offices (cumulative)	
2005	2	4,307	225	601	0.95	0.05	0.05
2006	2	3,481	130	430	0.91	0.09	0.04
2009	4	2,921	334	245	0.81	0.19	0.11
2010	4	2,342	122	143	0.77	0.23	0.05
2011	5	2,077	448	1,080	0.60	0.40	0.22
2012	5	549	147	402	0.44	0.56	0.27

Note: The years have been rounded up so do not necessarily reflect the recorded dates of data collection for ELSA, but are still linked.

The number of ELSA sample members who found access to post offices more difficult than they reported at baseline increased steadily across the waves (see table 5.17). The hazard also increases over time to a peak in 2012, which is partly attributable to the low remaining sample for that year. By the end of wave 5, fewer than half of the ELSA sample members still had the same level of access as they reported at wave 1.

Table 5.18 Discrete-time (piecewise constant) event history model predicting ELSA sample participants experiencing a reduced level of access to Post Offices

Predictor variable	β	SE β	e β
Time period 1 (Wave 2)	-5.56	0.19	0.00

Time period 2 (Wave 4)	-2.47	0.08	0.08

Time period 3 (Wave 5)	-1.34	0.07	0.26

Participant feels their health prevents them from doing what they would like, at least not often (base group = participant never feels this)	0.27	0.08	1.31

*Wald Chi2 (4) = 3166.44, $p < 0.001$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

The estimated hazard of an ELSA sample participant finding access more difficult increases monotonically over time (see table 5.18). The hazard of experiencing a reduced level of access to Post Offices was 31 per cent (95 per cent confidence interval of 13 and 52) higher for ELSA sample respondents who

reported that their health prevented them from doing what they like, relative to respondents who never felt this way.

5.3.2.4 Shopping centres

Table 5.19 Years and waves that 4,307 ELSA sample members, aged 65 and over, experienced a reduced level of access to shopping centres

Year	Associated ELSA wave	The number of ELSA sample members who			Proportion of ELSA sample members who		The probability that the ELSA sample members would experience a reduced level of access to shopping centres (hazard)
		Remained in the sample at the beginning of the year	Experienced a reduced level of access to shopping centres	Were censored by the end of this year	Continued to have the same level of access to shopping centres	Experienced a reduced level of access to shopping centres (cumulative)	
2005	2	4,307	219	615	0.95	0.05	0.05
2006	2	3,473	127	441	0.91	0.09	0.04
2009	4	2,905	385	244	0.79	0.21	0.13
2010	4	2,276	160	147	0.74	0.26	0.07
2011	5	1,969	470	983	0.56	0.44	0.24
2012	5	516	138	378	0.41	0.59	0.27

Note: The years have been rounded up so do not necessarily reflect the recorded dates of data collection for ELSA, but are still linked.

In table 5.19, the number of ELSA sample participants who started to find it more difficult getting to the shopping centre increased with each of the ELSA waves, the greatest increase occurring between waves 2 and 4. The hazard increases over time, with a spike in 2009 that corresponds to the beginning of wave 4 and the largest increase of sample members experiencing reduced levels of access. By the end of wave five, fewer than half of the ELSA sample members had the same level of access as they reported at wave 1.

Table 5.20 Discrete-time (piecewise constant) event history model predicting ELSA sample participants experiencing a reduced level of access to shopping centres

Predictor variable	β	SE β	e β
Time period 1 (Wave 2)	-5.49	0.19	0.00

Time period 2 (Wave 4)	-2.37	0.11	0.09

Time period 3 (Wave 5)	-1.45	0.11	0.24

Participant having the use of a car or van when needed (base group = not having the use of a car or van when needed)	0.23	0.09	1.25
	**		
Participant uses public transport (base group = never uses public transport)	0.17	0.08	1.18
	*		

Wald Chi2 (5) = 3450.51, $p < 0.001$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The estimated hazard, of ELSA sample participants starting to find it more difficult getting to shopping centres, increases over time (see table 5.20).

Participants who had the use of a car or van when needed had a 25 per cent increase (95 per cent confidence interval of between 5 and 49 per cent) in the estimated hazard of finding access more difficult than at wave 1. In addition, participants who used public transport (even if this was rarely) had a 1.18 fold increase (95 per cent confidence interval of 1.02 to 1.38) in the estimated hazard of starting to find it more difficult getting to the shopping centre.

5.3.2.5 Supermarkets

Table 5.21 Years and waves that 4,307 ELSA sample members, aged 65 and over, experienced a reduced level of access to supermarkets

Year	Associated ELSA wave	The number of ELSA sample members who			Proportion of ELSA sample members who		The probability that the ELSA sample members would experience a reduced level of access to supermarkets (hazard)
		Remained in the sample at the beginning of the year	Experienced a reduced level of access to supermarkets	Were censored by the end of this year	Continued to have the same level of access to supermarkets	Experienced a reduced level of access to supermarkets (cumulative)	
2005	2	4,307	215	609	0.95	0.05	0.05
2006	2	3,483	128	429	0.92	0.08	0.04
2009	4	2,926	334	244	0.81	0.19	0.11
2010	4	2,348	143	148	0.76	0.24	0.06
2011	5	2,057	476	1,046	0.59	0.41	0.23
2012	5	535	153	382	0.42	0.58	0.29

Note: The years have been rounded up so do not necessarily reflect the recorded dates of data collection for ELSA, but are still linked.

The number of ELSA sample participants who started to find it more difficult getting to the supermarket increased over time and, linked to this, the hazard also increased over time (see table 5.21). By the end of wave five, fewer than half of the ELSA sample participants had the same level of access to supermarkets as they reported in wave 1

Table 5.22 Discrete-time (piecewise constant) event history model predicting ELSA sample participants experiencing a reduced level of access to supermarkets

Predictor variable	β	SE β	e β
Time period 1 (Wave 2)	-5.79	0.21	0.00

Time period 2 (Wave 4)	-2.42	0.09	0.09

Time period 3 (Wave 5)	-1.27	0.08	0.28

Participant feels their age prevents them from doing what they would like, at least not often (base group = participant never feels this)	0.26	0.09	1.30
	**		

*Wald Chi2 (4) = 2971.62, $p < 0.001$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

In table 5.22, the time period predictors show an increase in the estimated hazard that ELSA sample participants experienced a reduced level of access to supermarkets, over time. Further to this, participants who felt that their age prevented them from doing what they would like had a 30 per cent (95 per cent confidence interval of 10 to 55) increase in the estimated hazard of starting to

find access to supermarkets more difficult than in wave 1, compared to participants who never felt like this.

A summary of the findings, the predictors with a statistically significant effects on access to different services over time, is represented in table 5.23.

Table 5.23 A summary of the predictors with a significant association on access to services over time, by service type

Type of service	Significant predictors
Banks and cash points	Age prevents the respondent from doing what they would like
Local shops	Having a long-standing and limiting illness or disability Age prevents the respondent from doing what they would like
Post Offices	Health prevents the respondent from doing what they would like
Shopping centres	Having the use of a car or van when needed Using public transport
Supermarkets	Age prevents the respondent from doing what they would like

5.4 Discussion

The main limitation of using logistic regressions in the analysis of this data is that they can only apply to the specific cohort at the particular wave; they cannot capture changes over time. Whilst the EHA explores the data longitudinally, the analysis in this project examines only the first instance of reduced access. This addresses the research question, but does not allow for dynamism in access to services over time. In general, the outcome variables of perceived access to services are not contextualised. For example, it is impossible to know whether a given service has changed location or delivery model between waves. On this basis, the longitudinal analysis can give only an indication of the factors that might affect access over time.

When examining the logistic regressions, participants reporting that they had 'much difficulty' or were unable to walk a quarter of a mile unaided was the predictor with the largest effect size across all waves in every service type (controlling for all of the other predictors in the models). Further key predictors with relatively large effect sizes were age and transport. Across all of the service types, participants aged 85 or over were consistently more likely to report that they found it difficult to get to the service. Not having the use of a car was a predictor with a large effect size of participants finding access difficult for all services apart from the Post Office. Car non-use is still a predictor in the Post Office model, however it was not a predictor with a high odds ratio compared to the other predictors in the model. Not using public transport was also a key predictor of difficulty getting to banks or cash points and shops, compared to the other predictors in these models.

These overall findings from the logistic regressions suggest that the walking ability of the participant is a consistent, significant and powerful predictor of poorer access. Walking difficulties, alongside a lack of transport options, suggests that an individual's overall mobility (and the different facets of this) is an important predictor of access difficulties. These factors could also help to explain the role of age (particularly being 85 or over) as an important overall predictor of finding access to services difficult as mobility could be affected by

ageing; this was still important when all of the other predictors in the model were taken account of.

Impaired mobility, especially walking difficulties, is indicative of a lack of person-environment fit. With this theory in mind, an individual who finds it difficult walking a quarter of a mile unaided would require a less challenging environment in order to continue accessing services in the community (see Lawton, 1980). The implication that access to services is a problem for respondents with walking difficulties, suggests that the environment is not manageable for them. Efforts to improve the walkability of the built environment could improve access to services for these people; having good quality pavements and benches and regular intervals could thus reduce the demands of the environment (Ståhl et al., 2008; Wennberg et al. 2010).

The logistic regression models relating to the Post Office (table 5.9) hinted towards links between access difficulties and known Post Office service changes. It is possible that the difficulty of urban participants in accessing Post Offices could be linked to the compulsory Post Office closures of the Urban Closure Programme (2003-5). In wave 1 (2002-3) where participants lived was not a significant factor in the model, suggesting that there was little difference in access between urban and rural residents. By wave 2 (2004-5) urban participants were more likely to find access difficult than rural participants, which could be linked to the closure of thousands of Post Office branches in urban areas that was ongoing at this time. By wave 4, where participants lived was no longer a significant predictor in the model, suggesting that similar proportions of urban and rural residents found it difficult getting to the Post Office after two programmes of Post Office closures. This may not mean that urban participants were finding it less difficult getting to the Post Office; it could be that rural residents were also starting to find it more difficult as the Network Change Programme (2007-9) closed further urban and many rural Post Office branches. This demonstrates the benefit of cohort analysis, as these changes could be detected at specific waves and linked with wider service changes.

In the event history analysis, the tables showing the number of ELSA sample members who continued to have the same level of access as wave 1, or a reduced level of access suggest that some services are more difficult to access than are others, with increasing age. Both shopping centres and supermarkets had the fewest sample members at the end of wave 5 with the same level of access as they reported in wave 1. Supermarkets and shopping centres could be in out-of-town sites, whereas banks and cash points, local and corner shops and Post Offices tend to be in central locations. The location of services could thus be a reason for ELSA sample participants being less likely to have the same level of access as they first reported.

Focusing on the number of sample members who experienced a reduced level of service access in each wave, banks and cash points, Post Offices and supermarkets had a relatively consistent number of participants starting to have reduced access across the waves. For local and corner shops there was an increase in participants finding it more difficult getting there between waves 4 and 5, whereas for shopping centres the increase was between waves 2 and 4. This suggests that self-perceived access to banks and cash points, Post Offices and supermarkets declines steadily with increasing age, but that this is not the case for shopping centres and shops. It is not clear why access to shopping centres and shops would start to become more difficult for a greater number of participants at certain times or ages, but it appears that the start of this difficulty is earlier for shopping centres than for local shops.

The attitude of ELSA sample participants seems to be a key predictor in starting to experience a reduced level of access to services, however the direction of the relationship is unclear; the attitude of sample members could be causing access difficulties, but attitudes may also reflect restrictions imposed by the environment. For banks or cash points, local and corner shops and supermarkets, the participants' attitude towards their age, or feeling that their age prevented them from doing what they would like, was a significant predictor in experiencing a reduced level of access. It is not clear, however, whether a person's attitude towards their age affects their behaviour or whether their behaviour shapes their attitudes. With Post Offices, the participants' attitude

towards health and feeling that this prevents them from doing what they would like was a significant predictor of starting to find access more difficult. Health was also included in the model for local and corner shops, however in this case it was the participants' self-perception of having a long-standing and limiting illness or disability that was a predictor of experiencing a reduction in access.

The predictors in the model for shopping centres were unexpected; having the use of a car at wave 1 and using public transport at wave 1 were predictors of experiencing a reduced level of access. This appears to be quite unusual and at odds with the findings from the logistic regressions, however it suggests that participants may be adjusting to changes in their circumstances and differing expectations. It could be that the participants who did not have access to a car and never used public transport had already adjusted to access with limited transport options by the time of the first wave of ELSA. Participants who enjoyed greater transport options in wave 1 may have seen these being reduced, and their access levels with it, over the time of the ELSA survey. An over-reliance on the car as a main mode of transport in older age could become a problem if car travel cannot continue. Whilst public transport may be an alternative option, there are many documented barriers that the individual may have to overcome (see Help the Aged, 2007a). Further, if public transport provision included community transport, then a possible lack of knowledge about how to access and use this may become a problem (Ward et al., 2013). Overall, this may mean that access to services is compromised while older people adjust to no longer relying on a car.

The findings of the event history analysis overall hint to attitudes and adjustments, which can be linked to ageing, as being key to trying to explain why some participants started to find access to services more difficult. There appears to be an element of person environment fit adjustments, with services that are likely to be in out-of-town locations having the most participants starting to find access more difficult and attitudes linked to health and ageing being influential.

The findings from ELSA overall suggest that there are differences in the factors that can explain access difficulties across the different services. The two different analysis techniques also highlighted different factors as important in explaining difficulties getting to services. This could be because they are coming from different perspectives. The cohort analysis (logistic regressions) contains a mix of ages at each wave, with people across the full age ranges of 65 and over and represents a specific point in time. The longitudinal analysis (event history analysis) however, shows how people aged 65 and over at wave 1 have changed over time; it is a view of ageing. These differences in approaches could explain why there were different factors being shown as important in the analysis. Mobility and age are highlighted as important predictors of finding it difficult getting to services for people aged 65 and over at each wave, however the attitudes held by participants prevail as important over time for an ageing sample of participants.

Whilst, the logistic regression and event history analyses give an indication of predictors of finding access to services difficult, these services have been examined in isolation. The following chapter provides the background to a case study exploring the impact of changes in a community on older people.

6 Impact of service change: Case study background

Service provision has changed in rural areas; the potential impact on older people is great, as alternative services may be long distances away. However, there is evidence that older people in rural areas are wealthier and more highly educated than their urban counterparts (Connors et al., 2013), thus access to resources could mitigate any impacts of change. Clearly it is important to assess impact based on the views of rural older people themselves to disentangle these issues.

This chapter sets the background to, and covers the processes, of conducting a case study of a rural village that has undergone changes to its services. This was carried out to address the research aim of exploring the impacts of rural service change on older people living in the community. Firstly, the rationale for selecting the case site is outlined. Secondly, the chosen methods are explained and appraised. Thirdly, the recruitment plan is given. Fourthly, there is an outline of the analysis strategy and finally, the limitations of the used methods are acknowledged.

6.1 Selecting the case site

The case study was chosen on the basis of meeting key characteristics that would help in achieving the overall project research objectives that were outlined in chapter three (a strategy advocated by George and Bennett, 2005). It was important to explore the impact of service change and I aimed to find a case site that had undergone change (possibly including closures), but not a total loss of services. I restricted service change to the last decade, in order to increase the likelihood that I could recruit people who had encountered change. As the focus of the case study explorations was on the rural dimension of change, it was preferable for the case site to be in a constituency classified as being very rural (R75) (see Defra, 2007). By assessing rurality at the constituency level, it meant that the surrounding area of the case site was also considered rural. To minimise the chances that an alternative service was easily accessible, which would have made it difficult to explore impact, it was sensible

for the case site to be a village. Hamlets were not considered, as the very small population would have likely made it difficult to recruit a suitable sample of the older population sub-group.

Publicly available data was used to judge whether a potential case site met the selection criteria and further internet searches were carried out to explore the context for each potential site. Information was sought about the size of the population, the types of services and amenities remaining and any organised village groups that might be routes for recruitment. In addition, this process was used to try to ascertain any unusual characteristics of the village, such as being a 'commuter village', being attached to a university or military base or specially designed for retirees. I acknowledge that the characteristics of the village and its service environment set the context for the issues that participants chose to raise; the case study cannot thus be generalised to all rural villages, but may inform our understandings of other villages with similar characteristics. Whilst the aim of the case study is not to be representative, I did want the findings to inform future work and therefore a particularly atypical village would have been inappropriate.

The case study utilised a range of methods, including a document review, focus groups and interviews with older people and representatives of village organisations and reflective fieldnotes.

6.2 Method – document review

Documents, in the context of this project, are texts, images or materials that are relevant to the topic of study but have been created independently of the researcher (Peräkylä and Ruusuvuori, 2013; Silverman, 2011; Prior, 2007). These documents can be examined by the researcher from two different perspectives; for their content or their agency (Prior, 2007). Much focus has been given to the study of the agency of documents as complete research projects (see Peräkylä and Ruusuvuori, 2013 and Prior, 2007 as examples). There have also been criticisms of researchers using documents for their content in a complementary role as part of a larger project (Silverman, 2011).

However, this criticism stems from a constructionist epistemological position that is not consistent with the rest of this project.

Peräkylä and Ruusuvuori (2013) suggest an approach that is suitable for a pragmatist epistemological standpoint (alongside discussions of the constructionist approach). They suggest that examining the content of documents is appropriate when this is part of a larger project and, in these cases, specific textual analysis techniques are not required. Hammersley and Atkinson (2007) also provide an approach that is consistent with the aims of my research. From their stance, documents can be used to provide background to the research setting; in this project, documents are used to contextualise the primary data collection and findings. They also take a more balanced viewpoint on the content versus agency priority in document reviews; suggesting that, while the content can be the primary focus, the reviewer should also consider the purpose of the document and its audience.

6.2.1 Identifying documents

Documents found for the review can be divided into three broad categories; documents generated by the case site; district and county level plans; and local newspaper reports. These document types represent different points on the continuum of informal to official formal (Hammersley and Atkinson, 2007). My choice of this range of documents aimed to reflect the policy stance in the local area and community viewpoints.

The documents generated by the case site were all publically available. The current parish plan (2010) sets out the priorities to be addressed by the Parish Council (and partners) and is based on consultation with the community. The minutes from the Parish Council meetings, starting from around the time of the parish plan and copies of the newsletter are also included in the review. Due to their local focus, the items and sections from these texts were the focus of the analysis of services.

The district (2007) and county level (2011) plans were identified through searches of the councils' websites. Searches were made to identify any

guidance about, or plans for, the councils' approach to services. The county community plans, both the existing and the consultation draft (2014) for the next, were included along with the current local transport plan (2010). A past district council action plan was also included as it discussed services and an updated version could not be found.

The local newspaper searches used one, countywide newspaper. The aim of the searches was to gain an insight into wider public opinion of services in the area and focused on the Post Office and buses. Newspaper articles were chosen for inclusion from these searches if the services were based in rural areas (this was gleaned from the text rather than a geographical definition of rural). These date from around the time of proposed Post Office Network Change Programme (predominantly around 2006) onwards.

6.2.2 Analytical approach

The documents were analysed using a thematic approach. Thematic analysis is suitably flexible to be applied to documents and is not linked to any particular epistemological positions (see Braun and Clarke, 2006). When conducting thematic analysis the researcher is looking for recurring ideas in the data that are relevant to the research question (Braun and Clarke, 2006).

Braun and Clarke (2006) set out six stages of thematic analysis: the first is to get to know the data. For my project, this meant reading through the documents that had been identified and making notes and highlighting areas of relevance and interest. The second stage is to start coding the data which, for this project, translated into noting key words or phrases on the documents. From here the relationships between codes can be explored and built into initial themes (stage three). These themes can then be examined and changed where this is needed, for example by moving codes to other themes or developing sub-themes (stage four). Stage five is to name the themes in a way that is concise and represents the data. Finally, stage six is to produce the report, demonstrating the argument that the analysis supports. Braun and Clarke (2006) recommend that the

researcher writes throughout these stages. In this project, the writing helped to re-shape and condense themes and develop the argument.

6.3 Methods - fieldwork

The fieldwork stage of the case study comprised a combination of focus groups and interviews; this was sensible for both methodological and pragmatic reasons. Focus groups offered the opportunity to explore a topic that people might not have considered fully before, or might not have a fully formed opinion on (Barbour, 2007; Litosseliti, 2003; Seymour et al., 2002). The group environment, and the opportunity to build on the comments of others and have views challenged, means that a group member's viewpoint could change throughout the discussion (Litosseliti, 2003). The focus groups provided a group view on the effects of service change, but at the cost of the depth of individuals' opinions; the use of individual interviews complemented this weakness.

For individual interviews, the effect of the researcher on the dynamic and data is important to reflect upon but this relationship is dulled in group interviews (Frey and Fontana, 1993). The researcher's influence is more prominent in the organisation of the group, with particular attention paid to the balance of homogeneity and heterogeneity amongst group participants (Barbour, 2007; Bloor et al., 2001; Krueger and Casey, 2009).

Focus groups have the potential to be a setting for sociable interaction, in addition to research discussions (Barbour, 2007). In this study, the social side of the research was thought to be important due to the hints that services may have been lost that served a social function. Ethically, it seemed sensible to try to 'do good' with the research by providing a sociable setting for participants (Israel and Hay, 2006).

Pragmatically, focus groups were more challenging to set-up as all potential group members had to be available at the same time. By contrast, interviews could be arranged to suit the individual participant. Further, as the fieldwork phase was nearing completion, it was considered unlikely that enough

participants would be recruited to be able to hold another group; interviews allowed these people to be included in the research.

6.3.1 Focus groups

Focus groups were chosen as an appropriate initial way to explore the views of case site residents on the topic of rural living and access to services for older people. There are different forms of focus groups; those used in this project were based around the following definition:

‘Focus groups are small structured groups with selected participants, normally led by a moderator. They are set up in order to explore specific topics, and individuals’ views and experiences, through group interaction’ (Litosseliti, 2003: 1).

Focus groups were chosen as a method due their use in encouraging participants to discuss issues and areas that they may not have given much thought to before (Barbour, 2007; Seymour et al., 2002). This is a particularly useful feature of a method in this project, as participants might not have developed their thoughts on services in rural areas and their access, as they might be considered routine elements of their lives. Focus groups have also been shown through previous research to be a suitable method to use with older people, even when exploring sensitive topics (see Brondani et al., 2008; Seymour et al., 2002).

The literature on this method suggests that there are some key considerations to explore before undertaking focus group research. Some authors highlight the importance of recognising the impact that being in a group setting has on participants and the data collected; the group dynamics are inescapable and participants are influenced by comments made by fellow participants (Barbour, 2007; Farnsworth and Boon, 2010; Litoselliti, 2003). Litoselliti (2003) suggests that participants may change their views and opinions in the development of the discussion. This could be viewed as problematic for some research projects, where the views of individuals are sought; however, this project was interested in the views of a subgroup of a community so interaction within the group was

not a limitation. Farnsworth and Boon (2010) imply that interaction should not be seen as a problem, drawing links between focus groups and other, natural, group social interactions. Group interactions allow for the discussion of social norms; this means focus groups are an important method for generating a deeper understanding of collective behaviours (Bloor et al., 2001).

The social element to being in a group could encourage people who are lonely or isolated to take part (Barbour, 2007); whilst this is not inherently a concern, it may become one if the participant would not otherwise wish to take part in the research. This issue was taken into consideration when applying for ethical approval for the fieldwork, in relation to informed consent and avoiding coercion. Further linked to the interactive nature of groups, there is the potential for participants to reveal more than they would prefer, which is problematised when this is in front of a group (see Barbour, 2007; Bloor et al., 2001). This situation raises the concerns that the researcher cannot guarantee complete confidentiality of views in a group setting and is, again, an ethical consideration that was explored ahead of fieldwork.

As with any social science research, the impact of the researcher on the collected data should be recognised and explored. Barbour (2007) suggests that the researcher should be aware of their effect on the generated data and be reflexive about this in the interpretation of the data. Frey and Fontana (1993) suggest that focus groups may be a way of lessening the impact of the researcher through the group setting, compared to interviews with individuals.

Some authors suggest that, for social science research, focus groups should have a maximum of eight participants per group and probably no less than five (Barbour, 2007; Krueger and Casey, 2009). For this project, I planned to conduct focus groups at the lower end of this spectrum, as a smaller group could be more accommodating for older people who might wish to bring carers or companions with them, or have mobility issues or hearing difficulties.

There needed to be a balance in the composition of each group between homogeneity and heterogeneity of the participants; the participants should have

a key element of similarity needed for the research, but have sufficiently varied views to allow for discussion (see Bloor et al., 2001; Krueger and Casey, 2009). In this project, all participants were residents of the same village and were older people, but they were different in many other respects as there were no further stipulations on taking part, or efforts made to recruit certain participants to particular groups.

I originally planned to conduct three focus groups as I considered that this would give a sufficient range of views and experiences for analysis, taking into account that participants were residents of a small community. Bloor and colleagues (2001) advise that researchers should plan to conduct only as many focus groups as are needed, due to the amount of time and effort inherent in focus group recruitment and organisation. As the fieldwork progressed, however, I decided also to conduct individual interviews to ensure that all potential participants were included in the project (even when they could not make the focus group dates). In the end, two focus groups were conducted instead of the original plan for three. This change of plan (conducting fewer focus groups and including interviews) allowed the maximum number of older people, who were interested in the project, to participate. I recognise that interviews are not a substitute for focus groups; instead, the interviews were undertaken to include people who would not have been able to take part otherwise.

I wanted to provide the participants with a relaxed environment in which to share their views (see Krueger and Casey, 2009). As part of this, I planned to include a refreshments break in the middle of the focus group (Barbour, 2007). Bloor and colleagues (2001) note that the venue will have an effect on the group, so therefore I chose to hold the focus groups in the village hall, where it was hoped that participants would feel comfortable.

This plan was followed for the first focus group, however the second focus group was different. The recruitment for the second group meant that the participants were friends and one of them asked to host the group at her home.

As the objective was to create a comfortable and relaxed environment, I considered this was suitable (and the other participants agreed).

Krueger and Casey (2009) suggest that researchers structure their focus group topic guide, or questioning route, using five main stages. First, there is the opening question, which should be something that participants know the answer to. Secondly, there are introductory questions that establish the topic and start discussion. Thirdly, transition questions start to bring in the key elements of the study. Fourthly, there are the key questions of the research and these 'usually begin about one third to half of the way into the focus group' (Krueger and Casey, 2009: 40). Finally, there are ending questions which can check whether participants feel they have still got something to raise that they have not been given the chance to. I used this structure as a basis for this project's topic guide (see appendix 10.1).

During the focus group, the moderator has several different tasks; on a practical level, it can be useful to make a note of the first few words that each participant says in the discussions in order to make the process of transcription easier (Barbour, 2007). In addition, the moderator should highlight to the participants the importance of hearing different views and reassure them that agreement is not necessary in the discussion (Bloor et al., 2001). As the element of interaction is crucial to the focus group method, the moderator should intervene in the discussions as little as possible (Litosseliti, 2003). This could become a difficult task, as moderators need to maintain a balance between participants developing the discussions and keeping these on the topic (Barbour, 2007; Seymour et al., 2002). Providing structure for the discussions could keep their discussions on the topic, but too much structure could impede any debates (Bloor et al., 2001). In the first focus group, held in the village hall, a colleague was present to note-take. This allowed me to focus on moderating the discussions, rather than making notes. As the second focus group was in the home of a participant, it was considered more suitable to make limited notes myself.

6.3.2 Interviews

After the initial analysis of the first focus group, the methods were widened to include interviews as well. This allowed participants to be included in the research if they could not make the time for the focus group or did not want to take part in a group. It also included interviewing the participants of the first focus group, as the analysis of the data from this focus group had highlighted unexpected areas that benefitted from additional exploration.

Interviews with village service or group representatives were also conducted to help address the limitations of recruitment. The majority of participants were part of village groups (or knew people who were) or used the village services regularly (see section 6.4 on recruitment for more detail). It was hoped that interviews with representatives might highlight how these services interacted with a broader range of older people than just those taking part in my project.

Interviews can work well as a complementary method alongside other approaches (Arksey and Knight, 1999). The same broad principles and research skills outlined in relation to focus group still apply to the interview strand of data collection (Arksey and Knight, 1999). The interviews were all semi-structured and used a topic guide that covered the same substantive issues as the focus groups (see appendix 10.1). As with the focus groups, the topic guide was used flexibly (Arksey and Knight, 1999).

Aware that potential participants could feel uncomfortable about a one-to-one interview, all interview participants were given the option of a paired interview (see Morgan et al., 2013). Two friends from the first focus group asked if they could be interviewed together. I gleaned from their comments that they felt a joint interview would be more enjoyable for them, rather than feeling uncomfortable about an individual interview; both participants had agreed and arranged individual interviews before suggesting being interviewed as a pair. Morgan and colleagues (2013) draw closer comparisons between dyadic interviews and focus groups than individual interviews and I found this in practice too. As friends, the participants felt comfortable talking about the issues

between themselves with little input from myself. Like a focus group, there were discussions between the participants and changing views in light of this. The level of interaction was similar to focus groups but it felt more manageable to keep these discussions on-topic (also noted by Morgan et al., 2013).

6.3.3 Fieldnotes

Taking inspiration from ethnographic practices, I made fieldnotes throughout the time I was in the case site; these were in addition to the notes made in the focus groups and interviews. The fieldnotes were a combination of observations of the built environment, the service environment and older people in the case site, alongside my own reflections. As noted by Emerson and colleagues (2001), fieldnotes are 'inevitably selective' (353) due to the flexible nature of these notes and uncertainties of what will eventually be included in the findings.

Researchers can adopt many different writing practices and timing for fieldnotes (Emerson et al, 2001). I chose to write the notes at the earliest time, away from the case site. This approach avoided the need to write publicly, which has the potential to seem intrusive or cause offence (see Emerson et al., 2001); it also meant I could focus on the primary reason for being in the case site (usually for recruitment or fieldwork).

The fieldnotes provide useful context to the case site and, therefore, the fieldwork findings. In addition, the fieldnotes supplement the findings by providing either corroboration or an alternative viewpoint, if applicable. The notes were anonymised and provide a general 'sense' of the village and observed events, rather than identifiable or specific occurrences or people.

6.4 Recruitment

The recruitment stage of the project was long-running and iterative, using a wide variety of approaches to reach older people living in the case site. To tailor the recruitment strategies to the context of the case site, I contacted the organiser of a village group. We met and discussed the project and their

thoughts on how I could meet or contact older people in the village. This person took part in the project through later recruitment.

Resulting from this discussion, I contacted the organisers of interest groups identified as having a predominantly older membership. At the first group I was given an opportunity to explain the project and informally speak to individuals. Many of the members, however, were from outside the village and therefore were not part of the population of interest. One person expressed an interest and took part in the project. At the second group, I was again allotted time to speak about the project and used the break to speak to members. This group consisted of people of all ages and individuals from outside the village. From the informal talks with members, I believe that there were seven eligible people there. Of these seven people, two had already been recruited, three did not want to take part and two expressed an interest (one participated).

As a strategy aimed at reaching older people who may not be involved with groups, or who are housebound, I placed an advert in the village newsletter. This newsletter is delivered to almost all the homes in the village; however, no one called as a result of the advert. In addition, I produced a poster to be displayed in the village notice board. The poster had to be posted to a designated person to then be placed in the noticeboard. The poster was not displayed; the designated person presumably vetoed it, without this decision being communicated, even though there was an accompanying note explaining my intentions and highlighting the Chairman of the Parish Council's approval.

To contact group organisers and service representatives, I used local knowledge and recommendations. This was successful, although not quick, and the majority of the contacted people agreed to participate in the project (four people in total).

To try to recruit older people who might not be members of village groups, I decided to recruit people going to use the Post Office van. This service was chosen as it had set, regular times and the customers could have an opinion on service change (as the Post Office is an example of this). This approach

generated interest and of six people who expressed an interest, three people participated. This strategy facilitated meeting older, potential participants but this was also the problem; two people who were initially enthusiastic, did not feel that they were well enough to become involved.

Recruiting at the Post Office van also had the benefit of becoming a recognised face in the village. On many occasions, I saw people who had already been recruited and people who would be recruited at later points. This approach gave the opportunity to talk to participants and potential participants and this may have helped to relax participants about taking part.

At the end of all interviews and focus groups, I took the opportunity to ask participants if they knew of anybody else who might be interested, however this did not result in any more participants. Snowballing did work well when participants decided to ask others, without my prompting. Participants informing others resulted in five extra participants.

6.4.1 Sample

In total, 15 people took part in the fieldwork; 11 people were involved in focus groups, follow-up interviews and resident interviews and four people represented village services or groups. All participants were either retired or able to retire and all lived in the case site. The overall sample consisted of 10 females and five males. The 15 participants spanned a wide age range, including some aged 85 or over. The sample represented a mix of people who had retired to the village from both rural and urban locations, and those who had lived in the village prior to retirement. All participants were white, which is representative of the case site and local area profile.

6.5 Ethics

As the ethical principles for primary research link with each other and there can be friction between the principles, it is crucial to address ethical considerations together (SRA, 2003). The order of discussion of ethical principles do not imply a hierarchy and the separation of issues do not indicate a distinction in practice.

The broad ethical guidelines of the Social Research Association (SRA) and others are supplemented with reflections of how these were navigated in the field, drawing upon notes kept as part of the fieldwork diary (as advocated by Miller and Bell, 2002).

From a broad perspective, social researchers should maintain the integrity of social research through addressing any misrepresentations of their findings and by not knowingly producing results that are misleading (SRA, 2003). The SRA (2003) also highlights a duty to academic peers to: provide sufficient information about the methods employed, report the limitations of the approaches taken and act in a way that does not damage the field for future research.

The use of ethics review boards is generally recommended (see SRA, 2003), if they are available. Miller and Bell (2002), however, note that gaining approval from an ethics board does not mean that ethics can be seen as 'dealt with'; ethical considerations need to be ongoing throughout the research. The Social Policy and Social Work Departmental Ethics Committee at the University of York approved this research.

6.5.1 Confidentiality and anonymity

Researchers have a legal duty, under the Data Protection Act (1998), to protect the personal details of those involved in the research, even if the participants themselves do not see this as necessary (Clark, 2006; Grinyer, 2002; SRA, 2003). Assuring complete confidentiality is not always possible and researchers need to explain any limits to confidentiality to participants (Israel and Hay, 2006).

In this project, it was necessary to collect confidential information, such as contact details, as part of the recruitment and informed consent processes. This information was either stored on a password protected, networked computer or in a locked filing cabinet in a secure building. The focus groups and interviews, which contained personal data, were recorded using a password protected and encrypted digital recorder. There were two instances where confidentiality was limited, which was explained to participants ahead of their involvement. Firstly,

all participants were warned that their confidentiality could be compromised if they disclosed the possibility of harm to themselves or others; statements to this effect were in the information sheets and consent forms (see appendix 10.1). Secondly, through conducting focus groups there was an inevitable compromise of confidentiality; participants in the groups know who else had taken part in that group and what each person discussed. In the participant information sheet for focus group participants, participants were asked to respect the confidentiality of others in the group (this was reiterated verbally at the start of the focus group).

Beyond personal details, the extent to which confidentiality extends to other information received by the researcher is contested. Clark (2006) suggests that confidentiality involves protecting opinions given in the course of the research. Walford (2005), on the other hand, states that 'it is totally ludicrous to offer confidentiality to respondents about the totality of the information that they give to researchers' (p. 85). This view is on the basis that making research findings publicly available is integral to the research process. The issue at the centre of this debate is anonymity, rather than confidentiality; that opinions (findings) are expected to be shared, but that these should not identify the participant.

Anonymising data is broadly defined as not naming, or including information, that identifies, those involved in research or the site of research (Walford, 2005; SRA, 2003). This process usually requires the researcher to remove identifying information at the earliest, feasible stage (Clark, 2006; Israel and Hay, 2006); in this project, this occurred during transcription. Whilst anonymity is the norm in research guidelines and conventions (see SRA, 2003; Grinyer, 2002; Walford, 2005; Nespor, 2000), it is contested; anonymity is assumed to be both feasible and desirable, but these assumptions have been challenged. Grinyer (2002) highlights that participants may want to be identified in research outputs, to keep 'ownership' of their data, even when the research is on a sensitive topic. For ethnographic and case study research, anonymity may be problematic at the least or impossible; this is due to the level of involvement from people linked to the research site (both participants and non-participants) and the visibility of the researcher inherent in these designs (Walford, 2005; Clark, 2006; Nespor,

2000). Aims of anonymity can be further undermined by the increasing amount of confounding information available online and the expectation that research outputs will be publicly available (usually online) (see Saunders et al., 2014; Tilley and Woodthorpe, 2011).

Ensuring the anonymity of participants can be particularly important in research on sensitive topics, some of which are outlined as part of the Data Protection Act (1998) (see Clark, 2006). Gibson and colleagues (2013), for example, highlight the need to provide additional assurances in research on suicide. Saunders and colleagues (2014) outline enhanced processes for maintaining anonymity, such as using multiple pseudonyms for each participant. Whilst anonymity is a common goal, there are situations where participants should receive additional layers of protection, linked to the increased sensitivity of the topic under study.

Anonymising the location of research can also link to the sensitivity of the research topic. Not identifying the research site can also add an extra layer of protection to participants (Clark, 2006). In light of the difficulties of ensuring anonymity in community based research outlined previously, it is unclear to what extent location anonymity protects participant anonymity. Clark (2006) highlights that naming some areas seen negatively by the general public could increase stigma. Crow and Wiles (2008) suggest that participants may suffer if the research site is portrayed negatively; however, Nespor (2000) highlights the lack of evidence that naming the location of research increases the chance of harm to participants. Tilley and Woodthorpe (2011) feel it is possible to identify the research setting without breaching the confidentiality of the participants, linking to the rationale that site anonymity is extra layer, rather than the only way to protect participant anonymity.

Even if place anonymity is regarded as a type of enhanced participant anonymity although difficult to ensure, naming the location has other potentially negative effects. The actual location of the research may not be important to the audience if the research aim is to convey 'normal or 'typical' life (Crow and Wiles, 2008). The implication of this is that not naming the research site may aid

the generalisability of the findings. Nespor (2000) is concerned that location anonymity can encourage generalisations beyond the reasonable or sensible, but also concedes that naming the site does not necessarily convey sufficient context either.

The context of participants and places is necessary for persuasive findings (Nespor, 2000), but it is this context which can be lost in the anonymisation process. When data is anonymised, or aggregated to background information, it is done at the cost of situating the data appropriately (Clark, 2006). This is a tension at the heart of anonymisation, with each project having to strike a balance between the competing duty to maintain confidentiality and produce meaningful, contextualised findings.

In this project, the balance between anonymity and context and consideration of anonymity at different levels, unfolded throughout. From the outset, I decided not to name the case site, but ensuring anonymity was ultimately compromised. While every effort was made not to identify the case site, this does not mean it is impossible to discover it via other means. To compensate for this, participant anonymity is protected to a higher level. The following sections cover these decisions and challenges in more detail.

The case site was selected on the basis that it was in some way typical, it therefore did not seem necessary to name it. Further, as the case site was small and not well known for a particular reason, naming the site would not add any inherent understanding for the audience. However, it was important to provide some context to the case site so that the potential for generalisations (and the limits of this) alongside links to the quantitative strands of work could be made. The context was provided through a document review and reflexive notes. The document review posed a particular challenge for referencing; the research site would be named in the references. To avoid this, I chose not to provide full references. To address potential concerns regarding the quality of materials (usually indicated to the audience through referencing), I did provide details about the type of source and year of publication; this approach follows a similar strategy to Bernard and colleagues (2010). I also avoided using quotes

from the documents, so the sources could not be easily identified through public record searches.

To recruit inclusively, I was visible in the case site and advertised in the village newsletter. This meant that I, and the research project, was a public presence in the village. Further, my recruitment at a village group was recorded in the village newsletter and made available online (as well as the initial advert). The openness of the community to the research project could reflect the perceived lack of sensitivity of the topic; people giving me their opinions in public at the recruitment stage (although this was not encouraged) further illustrate this.

The potential for the case site to be identified by an interested party means that anonymity at this level cannot be seen as an extra layer to participant anonymity. As a result, efforts to ensure participant anonymity increased as the project progressed. Demographic information about participants is provided only at the aggregate level. Whilst I had been given ethical approval to associate quotes with pseudonyms, this was not used as they convey contextual information, such as gender (Clark, 2006). Instead of using pseudonyms, participants were given a number. Participants were assured that they would not be identifiable in the research outputs (including in direct quotes) (see appendix 10.1). It was also explained that the demographic information provided in a self-completion questionnaire would be used to describe participants generally and would not be attached to individual quotations.

While I feel confident that participants cannot be identified in the research outputs and that I have protected their personal data, participants themselves could ultimately have compromised this. On more than one occasion during fieldwork, participants commented that they were aware of other people taking part or that they had told others of their involvement. Further, after sending participants a summary of the research findings, I was contacted to consult with the village newspaper about circulating the findings; clearly at least one participant had wanted to distribute the findings in this way. At this stage, I considered that participants had the right to ownership of their findings (although I did request that the full version was not made available online).

Again, this could reflect the participants' perceptions that this was not a sensitive topic.

6.5.2 Informed consent

Gaining the informed consent of participants is a two-way process; the participant needs to understand what is required of their involvement and voluntarily agree to take part and the researcher has to provide the information necessary for making this decision (Israel and Hay, 2006; SRA, 2003). Participants should be aware of their right to refuse becoming involved (and should not be under the impression that they need to take part) and that they can withdraw their data at any stage (SRA, 2003). Any potential risks or inconveniences of participating need to be communicated (Israel and Hay, 2006; SRA, 2003). It is also important that participants are aware of how the findings of the project are likely to be disseminated (Israel and Hay 2006).

In this project, information sheets were given to participants at least one week (although usually more) before their involvement to allow them time to consider their consent. The information sheets contained details about: the background and purpose of the study, what taking part involved, assurances of confidentiality (including details of the limits of this and storage of data), their freedom not to take part or to withdraw at any stage, what would happen after the fieldwork (including how their data would be used) and contact details (see appendix 10.1).

Written consent forms were used (as a requirement of the ethics board) and included tick boxes to encourage participants to read the form fully (see appendix 10.1). Miller and Bell (2002) warn that consent forms can be off-putting or alienating. In this project this was generally not a problem, however one participant mentioned feeling uncomfortable at this level of formality. This was taken as an opportunity to discuss why written consent was required and the important role of ethics in the research process.

Concerns have also been raised that consent forms can encourage researchers to think about gaining consent as a one-off event. Instead, consent should be

ongoing and required for different stages of the research and all elements of the research, especially where expectations of participation have changed through the research process (Birch and Miller, 2002; Israel and Hay, 2006; Miller and Bell, 2002). Consent was viewed as ongoing within the focus groups and interviews generally; if a participant did not want to continue a discussion or offer their view then they were not pressed to share more than they wanted. The initial plans for the fieldwork of this project changed as a result of findings from the first focus group. An amendment was made to the ethics board and participants from the focus group were invited to take part in a follow-up interview. New information sheets and consent forms were used for the follow-up interviews.

In the process of informed consent there is a fine line between encouragement and coercion. Researchers need to be aware of their own encouragement and that of others. It can be difficult to assess a (potential) participant's freedom to make the decision to become involved (Israel and Hay, 2006); the role of gate-keepers can further blur these distinctions (Miller and Bell, 2002).

In this project, an initial expression of interest to become involved was followed-up after (potential) participants had been given an information sheet and time to consider it. At the follow-up phone call, usually a week later, some people were unsure of the value of their opinions in the project; the importance of their contribution was explained but this approach fell short of pressurising potential participants and they were not contacted further. Where potential participants asked to be called at a later date (for example due to illness at the time), this was followed up, but not on multiple occasions.

There were cases where participants had recruited others into the project without my knowledge. In one case, I arrived for a planned interview with one person to find the participant had asked friends to join us for the interview. The participant had not passed on the information sheet. The interview/focus group did not go ahead, but it was used as a recruitment opportunity. Everyone was given a week to consider their involvement before planning a time for a focus group, away from any potential pressure from the original participant. The

original participant had acted as an informal gate-keeper to a group of people who had not been identified before; this was useful but I needed to postpone and ensure that the friends had the information required to be able to give informed consent.

6.5.3 Avoiding intrusion

Researchers need to be aware of the potential for intrusion, such as through the discussion of personal or private issues, or over-burden (SRA, 2003). In this project, ethical approval was given to leaflet-drop targeting houses about the research. After thinking about this more carefully, I did not feel comfortable targeting specific houses and felt this to be compromising privacy so this was not used as a means of recruitment. Instead, I placed an advert in the village newsletter that was distributed to almost all of the homes in the case site. The universality of the latter approach was considered to be less intrusive.

6.5.4 Inclusivity

Inclusivity is the general principle that people should not be excluded from taking part through a lack of effort or foresight from the researcher or because of financial restraints (SRA, 2003). The project utilised a wide variety of means of recruiting people, with no restrictions placed on being able to take part, other than living in the case site and being aged 65 or over. Efforts were made to take account of a possible range of barriers to inclusivity. The focus groups were relatively small (four or five people) to allow space to accommodate mobility equipment, carers or companions, if applicable. Checks were made that the participant could get to the meeting place and transport offered, if appropriate. For the interviews, participants were offered choice and control to avoid anyone feeling uncomfortable about a one-to-one interview; participants could choose to be interviewed as a pair or on the telephone and suggest the meeting place. In practice, these measures were rarely taken advantage of but the willingness to accommodate the participants' preferences may have helped them to feel assured that this had been considered.

6.5.5 Avoiding harm (and doing good)

Researchers have a duty to protect participants against any harmful consequences of taking part (Israel and Hay, 2006; SRA, 2003). Israel and Hay (2006) advocate a broad examination of the potential for harm; they argue, 'in social science, research harm is generally more likely to involve psychological distress, discomfort, social disadvantage, invasion of privacy or infringement of rights than physical injury' (96). In this project, the idea to use the method of walking interviews was abandoned for fear of exposing participants to physical harm due to the narrow pavements and unsafe crossings in the case site. As the research could involve participants discussing ideas around independence (or loss of), it had the potential to cause distress. A list of relevant charities was drawn up to give to participants in case any were unsettled by the topics.

Israel and Hay (2006) highlight that there have been calls for social research to go beyond the idea of avoiding harm to trying to provide some benefit to those taking part. The fieldwork, especially the focus groups, had a sociable aspect that participants seemed to enjoy. One of the focus groups discussed the community transport provision in their area, which some participants were unaware of; two participants in this group praised the meeting for sharing local knowledge. As this information had been so helpful in the first focus group, and seemingly knowledge of the service was limited, I contacted the organisation and was sent leaflets to distribute to other participants who were unaware of the scheme. Some participants intimated that they enjoyed helping young people and were interested to know about my future career plans.

At the end of the analysis of the fieldwork, I sent a summary of the findings to the participants. Initially, I sent the summary to one participant for feedback (which was positive). On receiving the summary, some participants wrote to me to comment that they were interested in the findings, enjoyed taking part and wanted to share the news for the village's benefit.

6.5.6 Researcher safety

Lee (1995) highlights a range of potential safety concerns for researchers in the field, including environmental, biological and human agency dangers. A distinction is made between hazards that are ambient or situational. With ambient dangers, the setting of the research puts the researcher at risk, whereas situational risks involve the researcher's presence or actions that result in dangers (Lee, 1995). It is noted that even in relatively calm fieldwork contexts, the researcher's role can change (for example between insider and outsider) and it is important to maintain a nonthreatening role (Lee, 1995). It is therefore crucial that researcher safety is considered and actions taken to minimize these risks (SRA, 2003).

The predominant risk associated with the fieldwork of this project was meeting participants for one-to-one interviews in their homes. To minimize this risk, I recorded the details of the interview (location, start time and predicted end time) on a shared drive within the Social Policy Research Unit. This record was accessible to administrative staff in case there was a problem. I also used the Argyll system for recording my arrival at the interview location and expected finishing time and logging out when I left. If I did not log out at the expected time then reminders were sent, and ultimately the Social Policy Research Unit would be informed along with the Police. As a back-up, I kept my personal mobile phone with me, for which the Social Policy Research Unit administration team had the number.

Lee (1995) recommends sharing fieldwork experiences or difficulties to increase discussions around researcher safety. The SRA (2003) see it as an obligation to colleagues to ensure practices that keep all safe. Ahead of conducting the fieldwork, I attended a training and discussion event on handling difficult contacts run between the Social Policy Research Unit and the Samaritans. This event helped me to think through the risks I might face in the field and strategies to avoid problems escalating. In addition, I shared my experiences of difficulties using the Argyll system (which relies on telephone signal) in a rural location and

the strategies I used to overcome this problem; I used my personal mobile as a back-up to log in and out as it did not have the same signal problems.

6.6 Analysis

The exploratory nature of the research question addressed by the case study was suited to an analysis based on themes. Having used thematic analysis (as outlined by Braun and Clarke, 2006) for the document review, I appraised this approach for the fieldwork analysis. Whilst the principles of thematic analysis were suitable, I considered that it was also important to be able to show the stages of the development of the analysis. This additional clarity was useful for sharing ideas with others and having findings that could be traced back to the raw data. As a result of these considerations, the 'Framework' approach (Ritchie and Spencer, 1994) was chosen as the most appropriate analysis technique for the case study fieldwork data.

Ritchie and Spencer's (1994) 'Framework' was used to analyse the data generated through the case study fieldwork. It is just one approach to the analysis of qualitative data; all strategies have to discover a way of combining the different forms of data generated (such as interview transcripts and field notes) into coherent findings. This approach, like others, is based on themes; in this way, it is a similar approach to the thematic analysis undertaken for the document review. However, with greater quantities of data, with more overlapping areas than the document review, the Framework approach offered more benefits to the fieldwork analysis. Framework was chosen as it is suited to social policy research and is versatile across a variety of types of research objectives. It is appropriate to use for the qualitative strand of a mixed methods project, with a requirement of robust qualitative findings. The Framework approach is also a transparent process that allows for scrutiny.

The following are the key traits that are associated with the Framework approach (as outlined by Ritchie and Spencer, 1994) are that it is inductive, with findings based in the data and iterative. It allows the analyst to be both methodical in examining the detail and exhaustive across all of the data. Finally,

there is a documented analysis trail back to the original excerpt, making the process clear for others to evaluate. This approach consists of five stages, completed iteratively and creatively rather than linearly:

- Familiarisation
- Identifying a thematic framework
- Indexing
- Charting
- Mapping and interpretation (Ritchie and Spencer, 1994).

At the familiarisation stage, the analyst immerses themselves in the data, listening to the recordings, reading the transcripts and field notes. In this project, this stage was prolonged as I conducted the interviews and transcribed the recordings. As a result, the familiarisation was already ongoing by the time I started the analysis process. At this stage, notes are made about any recurring ideas or themes from the data.

The next step is to identify a thematic framework that the data can be organised against. This uses the analyst's notes on potential themes and can be a mix of *a priori* issues, new areas identified from the data and analytic concepts. Some of the themes may be recurring issues across the whole dataset; others may be areas that are particularly pertinent to the research questions, but less frequently mentioned. The framework is revised and improved by trying it with some of the transcripts. Ritchie and Spencer (1994) note that the first framework can be overly descriptive. The framework for this project underwent five refinement stages to move from heavily descriptive to a mix of descriptive and analytical themes (see appendix 10.5). This was a lengthy process and benefitted from revisiting the literature, discussions about the data and concepts and seeing the data I had as part of an overall picture. By trying each framework iteration on a few transcripts, I judged whether the categories accurately reflected the totality of what the participant was conveying; earlier frameworks only partially achieved this and it was difficult to decide on how to index the data, which I considered was a sign that the framework needed improvement.

At the indexing stage the data are marked according to the framework. This is not an inherently straightforward process and includes making subjective judgements about what participants meant and the motivations behind their comments. The indexing process makes these subjective decisions explicit and open to scrutiny.

Charting helps the analyst to see the overall picture of evidence. The relevant data (identified at the indexing stage) are extracted into a matrix, organised for each theme by participant. The lifted data are summarised with a reference back to the original text. The completed matrices allow the analyst to examine all the participants' comments about each theme.

The final stage, mapping and interpretation, involves identifying the similarities and differences across all the charts and researcher notes. The aim of this stage is to build a sense of order in the data, not just to bring together patterns. At this stage I developed mind maps and models to think through the themes and concepts identified. The final models and interpretations varied from those set out in the framework and continued to develop iteratively through the writing of the findings.

6.7 Limitations

The main limitation of the case study is the sample included in the research. All participants were relatively active older people and, although they acknowledged that there were less able older people living in the village, none were recruited. This limitation was partly addressed through interviews with village service and organisation representatives who could offer some insight into the views and experiences of more vulnerable, older village residents. This approach, however could not compensate completely for these people not being included as participants themselves.

Further, the group dynamics of the focus groups (and the pair interview) had the potential to be missed in the traditional audio recording and transcription process, as they are predominately non-verbal (Farnsworth and Boon, 2010). I

addressed this limitation through making notes of the groups, including my views on the dynamics and atmosphere, to provide context in the analysis.

6.8 Summary

The case site identified was rural and had undergone service change. Four methods for exploring the case site were outlined: a document review of the local policy environment and local opinion, personal reflections on observations, focus groups and interviews (both with older people). The ethical dilemma at the forefront of the case study was explored; ways of ensuring participant anonymity were explained, which were robust to the consequences of potential threats to location anonymity. The following chapter presents the findings of the case study, based on the range of methods undertaken.

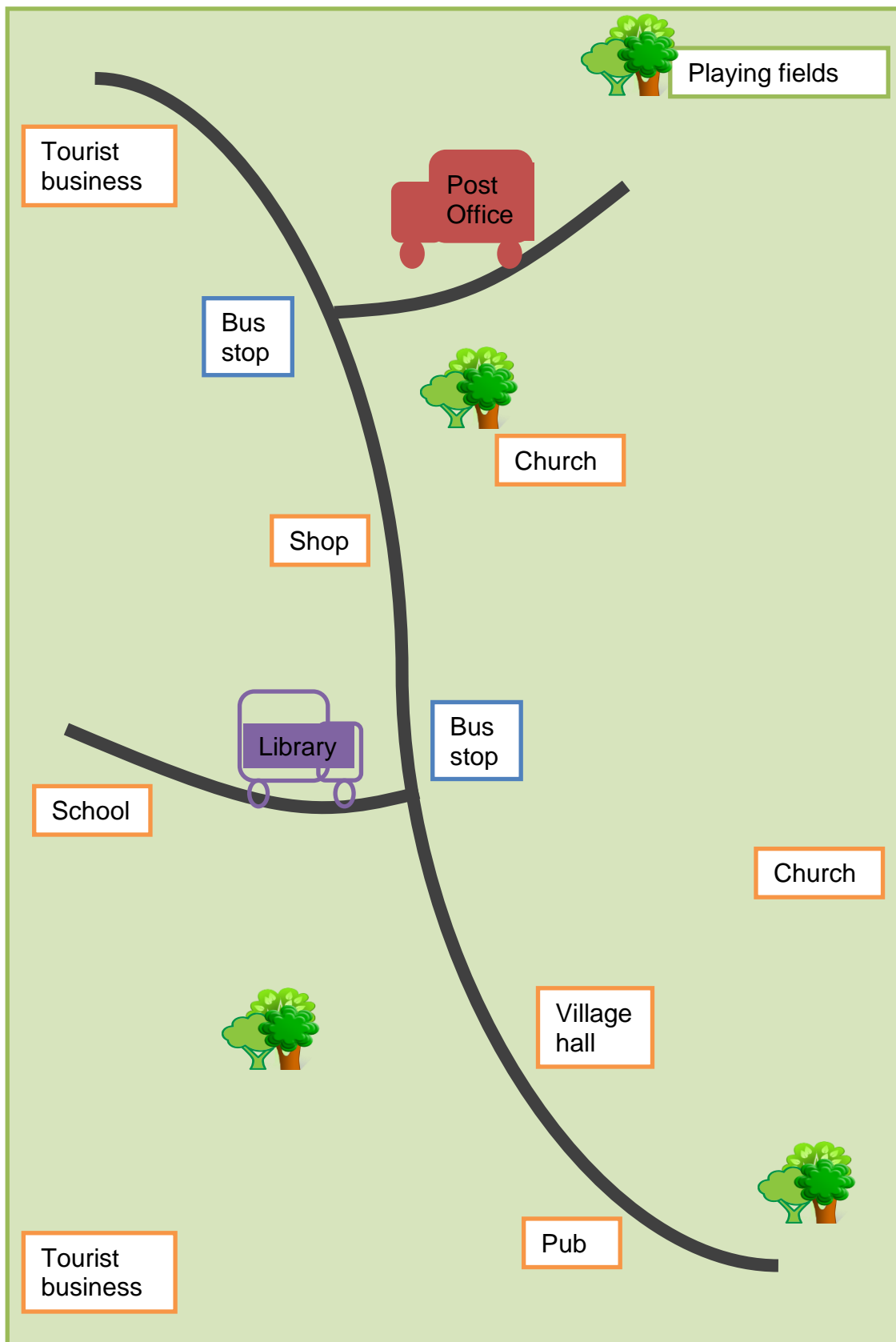
7 Impact of service change: Case study findings

This chapter provides an overview of the village before detailing the findings from the document review, personal reflections on observations and the fieldwork, before a discussion. The chapter contributes new findings to the relatively under-researched field of older people's perspectives of rural service change. These results have potential ramifications for the independence of older people and the suitability of rural areas for ageing.

7.1 Overview of the village

The service environment of the village had undergone a long-term period of change and decline. In the rough five years before the start of fieldwork, the village had lost a local garage, the pub had changed hands and had a period of closure, the frequency of the bus service had diminished and was under a further review for change and the Post Office branch in the village shop had closed and been replaced by a van.

Figure 7.1 Map of the village



Note: The map is to give an impression of the village case site, it is not the exact layout.

7.1.1 Fieldnotes – Observations and reflections

Visits to the village for recruitment and fieldwork over a period of eight months helped to build a picture of the case site in context. In general, the village seemed to be quiet but there were pockets of activity at set times; for example, when a bus was due or people were getting off a bus, when the pub was serving lunch or when the Post Office van was in the village. Seeing the village at busier times meant I could gain a sense of the walkability of the village from the perspective of residents and I observed their navigation of the area; this was in addition to my own experiences of the walkability of the village. The paths are narrow and quite uneven in places. In addition, I noticed people struggling to cross the road safely as dropped curbs on one side did not correspond with the other side. On one occasion, I saw an older woman with a shopper trolley walking in the road until she reached a dropped curb on the side she wanted to walk on. On-street parking and blind corners also made it difficult to judge whether it was safe to cross (there were no designated pedestrian crossings in the village).

The Post Office van's designated times in the village gave a chance to see how the service was used. I noticed that some customers struggled to get into the van; the van was about two feet from the road level and, although there were steps, these were difficult for some customers with walking aids. Although the van is technically wheelchair accessible, I noticed wheelchair users waiting outside while others used the service, seemingly on their behalf. When the weather was poor (and especially in the rain), I saw more people driving to the Post Office van than when the weather was better. This could indicate that people from the village were driving to the service rather than walking in the rain. Drivers tended to wait in their cars until it was their turn to be served. On at least two occasions, during the time I visited the case site, the van did not attend at its allotted time; on one occasion this was scheduled and notice had been given, but on the other it was unexpected.

I gleaned from informal conversations with several village residents that the Post Office van had originally used a stop in the centre of the village (which the

library uses). It had to move to its current location due to insufficient wireless signal in the centre of the village, meaning the services it offered could not be run. The current location, however, is towards one end of the village and up a hill (in order to gain signal strength); this has implications for the accessibility of the service for pedestrians.

When deciding to recruit near the Post Office van, I was aware that there could be some hostility from the service staff. To try to avoid this, I spoke to the member of staff about the project and asked if they were happy for me to recruit nearby. The staff members (two working on different week days) were friendly and interested in the research. It was interesting that I was hearing complaints about the Post Office van from village residents but the staff saw their role differently; they pointed out that the Post Office van was a bonus when the permanent branch was going to close and felt that a wide range of services were offered.

On one occasion, I planned to recruit at the same time as the library van visiting, however the van did not arrive when it should have. This, combined with the experiences of the Post Office van, suggests that mobile services can be unreliable.

7.2 Document review – overview of the village within the local area

7.2.1 Demographics of the area

The district that contained the case site had a rural classification; it had one of the lowest population densities of any district in England and over half of its district population lived in a village, a hamlet or isolated dwelling (District Plan, 2007). Viewed as partly attributed to this, the district had an average of more than one car per household and fewer than one in five households were without a car (District Plan, 2007). This finding was also replicated in the village, where the reliance on cars for travel was linked to the rurality of the area (Parish Plan, 2010; Parish Council Minutes, 2010).

The district had a greater proportion of older people in its population than the average for England; 20 per cent compared to 16 per cent for England (District Plan, 2007). The case site's parish plan (2010) also hinted at an ageing population, as some of the main reasons given by parishioners for moving to the village were for retirement and upsizing or downsizing their property (which could be linked to retirement).

Overall, this suggests an area, and village, that has an ageing population situated in a sparsely populated and rural area, with a reliance on cars for transport. This is a combination that has the potential to make access to services difficult; as the literature review suggested service delivery can be more problematic in rural areas and for people without a car.

7.2.2 Rural challenges

From the documents overall, funding appeared to be a key challenge to providing rural services, with hints that this was not seen as a priority for central government. The Local Transport Plan (2010) outlined that the County Council might be able to apply for a new source of funding to boost rural access to public transport, however the implication was that a source of funding was not in place solely for this purpose. The newspaper articles linked the removal of government support and concerns about future funding for Post Offices in rural areas to the closure of many rural Post Offices (Local Newspaper – PO, 2006a; Local Newspaper – PO, 2006b; Local Newspaper – PO, 2006c; Local Newspaper – PO, 2006e; Local Newspaper - PO, 2004). In addition, it was suggested that there was limited government support for demand and community responsive transport options¹, which are prominent in rural areas and that the concessionary bus passes had not been extended to cover community transport options (Local Newspaper – buses, 2007a). These funding issues, however, were in tension with the reporting that some rural services

¹ Community transport is not-for-profit alternatives to local transport difficulties, such as a lack of appropriate commercial services. Community transport covers a wide range of service delivery models, some of which can be 'door-to-door' and organised according to individual need, this is sometimes called 'demand responsive' or 'dial-a-ride' options (see Age Scotland, n.d.).

were not being used to their full capacity (Newsletter, 2013b; Local Newspaper – PO, 2006d; Local Newspaper – buses, 2007b).

Service cuts in the case site had been explicitly linked to cost and usage (Parish Plan, 2010); however, this does not take into account the importance of the service for those who do use it. Taking the bus service as an example, the community consultation for the Parish Plan (2010), completed by over two thirds of households in the Parish, reported that the vast majority of residents either never used the buses or used them infrequently. The parishioners who did use the bus service, however, used it primarily for shopping and getting to appointments. Thus, whilst the majority of the parish did not use the bus service and were likely therefore to be unaffected by the service cuts, the parishioners who did use it might have felt the impact as it had the potential to affect their ability to get to other services. It was unclear from the Parish Plan (2010) whether use of the bus service, either in general or for shopping and appointments, was linked to the age of the respondent.

From the documents referring to the village, it appeared that alternative forms of service provision were operating in the area (Newsletter, 2011a; Newsletter, 2011b; Parish Council Minutes, 2011a). Mobile services could be preferable to permanent services for those community members, attending Parish Council meetings, who valued the ‘village feel’ and were concerned about development plans changing the character of the village to be akin to a small town (Parish Council Minutes, 2010).

There were hints in the documents of an underlying tension between the wants and needs of different community members, which was highlighted by the issue of street lighting. There appeared to be an ‘official’ view from the Parish Council that increasing the numbers of streetlights was undesirable due to concerns around light pollution (Parish Council Minutes, 2010). This was not necessarily supported by the consultation with community members. The Parish Plan (2010), based on a survey completed by over two thirds of Parish households, showed that equal numbers of people were happy with the number of

streetlights or wanted to see more in the area. It is therefore unclear which view should be prioritised by the Parish Council.

7.2.3 Social role of services and risk of isolation through loss

The documents, especially those from the village, acknowledged the social role that services provided. Parishioners who used the bus service reported that this could be for social and leisure reasons (Parish Plan, 2010). Providers of a new service in the area, a mobile library, highlighted that they wanted the library to be viewed as a community resource (Newsletter, 2011a). As part of this, the library were recruiting volunteers to offer home delivery options for community members who were unable to get to the van and organisers hinted that a personal service would also be valued for its social role (Newsletter, 2011a; Newsletter, 2013a; Newsletter, 2013b). The loss of the social contact linked to the permanent Post Office was raised in the community consultation for the Parish Plan (2010). The local newspaper coverage of the Post Office closures suggested that Post Offices were viewed as key community contact points, with wider social roles (Local Newspaper –PO, 2007a; Local Newspaper –PO, 2007b; Local Newspaper –PO, 2006c; Local Newspaper –PO, 2005a; Local Newspaper –PO, 2008a; Local Newspaper –PO, 2008b).

Documents from the district and county level recognised that issues around service access and isolation were linked. The District Plan (2007) envisaged increasing community transport provision as it acknowledged that people with a lack of public transport options were at risk of social isolation. In addition, the draft County Community Plan (2014) linked changes to services, an ageing population and the risk of isolation as an area for future policy development.

7.2.4 Linked context and nature of services

Services can be linked to each other in a variety of ways. There is a suggestion from the documents that services can support one another, for example, a Post Office based in a village shop could benefit from the custom the shop brings and visa-versa (Local Newspaper – PO, 2006b). Public transport is an inherently supportive service as customers travel to access other services, but

also one form of transport may link up with another (Local Newspaper – buses, 2010; District Plan, 2010). Services may also facilitate access to further, linked services, such as the mobile library offering computer lessons and access to the Internet (Newsletter, 2011a). The downside of services supporting one another is changes to one service could result in loss that is more widespread; a member of the public in the case site noted the impact on the village, and concern for the future, as a result of cumulative loss and change to services (Parish Council Minutes, 2011b).

The linked nature of services is further highlighted in the case study where pedestrian access was reported to be problematic. The poor state of footpaths was noted as a cause for concern (Parish Council Minutes, 2010; Newsletter, 2013b). In addition, the perceived lack of street lighting was also associated with problems walking around the community (Newsletter, 2013b). The newsletter authors passed on praised they had received, from members of the public, regarding a snow-clearing initiative that helped to maintain access to basic services through a hard winter (Newsletter, 2013c). These issues highlight the fluctuating view of access to services and how journeys can be disrupted by wider environmental factors.

7.2.5 Community involvement with, or responsibility for, delivering services

Both the County Community Plan (2011) and the draft County Community Plan (2014) proposed that, in the face of funding challenges and service cuts, communities should be involved in designing and/or delivering services to meet any shortfall. Neither document is clear on the form that this involvement might take or provides any examples, however this rhetoric is also seen in the documents from the case site. Where services in the village had closed, it had been suggested by a traditional service provider and a member of the Parish Council, that a community-run initiative could be an option to continue the service, however this did not come to fruition as non-community based alternatives were found (Newsletter, 2011c; Newsletter, 2011d). There were also ongoing calls for volunteers to clear the main paths of snow and to deliver library books to community members who were unable to go to the van

(Newsletter, 2011b; Newsletter, 2012; Newsletter, 2013a; Newsletter, 2013b). These examples from the case study, taken with the community plans, suggest that community members were being encouraged to take responsibility for running a service that had been cut or extending a service already provided. However, as neither of the previous requests for community run services in the case site was taken advantage of, it appears that there is little interest in doing so amongst residents.

Whilst the county council may be keen for communities to take some responsibility for providing their own services, there are hints that communities may not be as enthusiastic. As mentioned, neither of the options for the village to run its own services was developed. In addition, it appears that recruiting volunteers for the snow clearing was slow and resulted in fewer people volunteering than was required (Parish Council Minutes, 2012a; Parish Council Minutes, 2012b); although this could also reflect the physical nature of the task being unsuitable for some. It therefore appears that there was a disjuncture between the county council plans and what the community was willing and able to provide for themselves.

In addition, the documents from the case site and the newspaper coverage of the Post Office changes raised concerns that community views about service changes were not being taken into account, despite their lobbies (documented in Parish Plan, 2010). There appeared to be a longstanding effort by the Parish Council to reinstate the permanent Post Office and relay the concerns of the community regarding the Post Office van to the Post Office (Newsletter, 2011a). In the wider area, campaigns to try to halt changes to Post Offices were also unsuccessful, which led some communities to feel that their views had been ignored by the service providers (Local Newspaper – PO, 2005b; Local Newspaper – PO, 2006c; Local Newspaper – PO, 2006a). However, it does appear the views of the case study site were taken into account regarding the mobile library (Parish Council Minutes, 2011a; Parish Council Minutes, 2011b; Parish Council Minutes, 2011c); although this could also be a reflection of the Parish Council's leverage over the local council's services, compared to a national business. Overall, it could be even more challenging to engage with

local communities to help shape and deliver their own services if they feel that their past views on services have been ignored.

7.3 Fieldwork

The analysis of the fieldwork led to the identification of three main themes, each encompassing several sub-themes. The first theme grouped older people's approaches to the lack of, or change, in services; this included reducing the frequency of service need, finding alternatives to services, coping and the importance of transport. The second theme outlined the factors that build a sense of community, making the village feel like a good place to in which to grow older; the elements highlighted were the vibrancy of the village, the mix of people, having a caring environment and feeling a sense of belonging. The third theme brought together the concerns for the future of the village, which included the impact of change to the village services, fears for the stability of the remaining services and the threats posed to community cohesion.

Each of the three themes, and their sub-themes, are explored in relation to the research evidence. These findings are then followed by a discussion of the case study findings.

7.3.1 Approaches to the lack of, or change, in services

Participants took a variety of approaches to adjust to either changes in services or the general lack of services in their village. These strategies can be broadly categorised as reducing the frequency of service need, finding alternatives to service problems, coping and dependence on transport for accessing services outside the village.

To reduce the frequency of service need, participants mentioned that they kept a stock of everyday items, such as stamps; this reduced the reliance on the shop or mobile Post Office, which had limited opening hours. The distance from the nearest supermarkets (or the supermarkets of choice) meant that some participants bought larger quantities, weekly or monthly, to freeze. By doing so, participants did not need to find fresh food locally, or travel to the supermarket,

on a daily basis. One participant, who moved to the village from an urban area, found village life came with inconvenience and a need for increased preparedness, using the experience of the limited opening hours of the village shop and running out of milk:

“You’ve got to rearrange your lifestyle to have stuff, whereas before you think ‘I’ll just pop in the car down the road, walk down the road to the shop’. Whereas now you’ve got to tread into [the nearest town]”
(Participant 1, interview).

Another approach was setting up automatic financial arrangements, such as direct debits for the payment of bills, to avoid regular trips to the bank or Post Office for this purpose. Finally, it was suggested that by having a car people were protected from the changes to the bus timetable and what was viewed as a limited bus service.

Participants told of a range of alternatives they had found to compensate for the lack of services in their village. The cost associated with accessing services in rural areas was a recurring issue where alternatives were sought. This included supermarket shopping online, as the delivery costs were cheaper than the fuel costs to travel to the supermarket. However, someone else used the supermarket shop as an opportunity to fill up with fuel, as the local petrol stations were more expensive than the urban fuel prices. Members of the community, paying high prices for oil in a village without a gas supply, had also grouped together to take advantage of bulk savings.

Further alternatives were linked to the availability of a car. Driving was a way, for some, to avoid problems associated with the bus service. For example, driving allowed shoppers to buy more, or bulkier, items without having to worry about carrying it back. Driving was also key to overcoming transport difficulties associated with disability or destinations not on the village bus route. Here, these difficulties were solved by asking for, or offering, lifts within social networks.

By reducing the frequency of service need or finding alternatives to the lack of services in the village, older people were actively managing their service environment. This approach was predominantly proactive, aimed at offering protection from further, future service decline and was dependent on having the necessary resources. The managing approach contrasts to that of coping, which was a more passive reaction to the loss or lack of services. Coping was an attitude rather than a strategy; people perceived change as inevitable, with little opportunity to shape the outcome.

These older people coped with the reduction of services and changes in how services were delivered through organising and planning their time carefully to ensure their availability for the more limited service. For example, people arranged their plans and commitments so they were in the village when the Post Office van was due. These coping strategies were reactive to service retrenchment, which meant exposure to the effects of any further change.

Coping was not seen as a development that was particularly positive or under their control; it was a necessity (possibly as they felt there were few other options available to them). Thinking about service change:

“14: I think we’re having to put up with all these things

15: That’s right

14: I’m sorry but it maybe doesn’t look right but we’re having to cope with it

12: And we do cope

14: We’re forced to cope, can I put it that way?

15: We have to and I think sometimes when you have to do something, it just gives you that boost

13: You get on and do it

15: And you have to get on and do it

14: Yes” (Participants 12, 13, 14 and 15, focus group)

Overall, there were hints that some factors made coping easier. These included being healthy and able to afford the increased costs associated with living in a rural area. In addition, some people felt they were able to cope with the changes as they had experience of more challenging circumstances in childhood, recognising the harsh life of their parents in comparison to their situation. This discussion led to a sense of stoicism and self-reliance amongst this group.

In general, the participants in this focus group concentrated their discussions of service change around the idea of coping, whereas others spoke more about managed service change. The majority of the participants in this focus group were bus users and had lived in rural areas for most of their lives. As such, potentially these people might not recognise the active solutions in their own behaviour. For example, I overheard one member of this focus group arranging lifts, but this was not mentioned as a strategy in the discussion. It could be that approaches such as these are seen as ‘normal’ for people who are used to living in the country and therefore not viewed as important. There was a hint of this in the other focus group as people who had come to the village from the city mentioned some of their active approaches; one member who had mostly lived in the country underplayed the significance of such strategies, instead referring to them as ‘country ways’ (Participant 5, focus group).

In addition, many of the approaches to managing the dearth of services in the village relied on driving being an option, something that was not the case for the majority of participants in the ‘coping’ focus group. Other resources used in management strategies, such as the internet, were also not available to some members of this group. This difference of strategy highlights the role of resources in adapting to service change and the assumptions that these are available to all older people. Finally, there was a strong group narrative of resistance to change and ‘making do’ in this focus group, which could explain

why coping mechanisms were prioritised in the discussion over managing approaches, which tended to be more akin to an acceptance of change.

Across the board, people stressed that transport was essential for living in their village, whether that was by driving or using the buses. Transport was a necessity for accessing services outside the village; common examples mentioned included shopping and appointments. In this sense, transport was needed to make up for the village having few services. In addition to its practical purpose, both drivers and bus users linked having transport available to freedom and independence. For one participant, driving allowed continued access to services in the village, including meeting people, despite decreasing personal mobility, and without having to rely on other people. Some participants hinted that they had changed their driving behaviours, such as not driving at night and only using familiar routes, to avoid having to stop driving. For another participant, the frequency of the bus route allowed continued charity work in a nearby town, something that was enjoyed and linked to having freedom. Consistently in their accounts, older people mentioned how important transport was for them and that they could not manage without it.

7.3.2 Sense of community: making the village feel like a good place to grow older in

What individuals liked about the village, and whether they thought it was a good place to grow older in, centred on the social and community environment of the village, rather than the functional role of village services.

7.3.2.1 *Vibrancy of the village*

The feeling that the village was friendly was an important element of community vibrancy. Several people, although not all, mentioned that villagers greeted each other in the street or that there was a sociable atmosphere. For some who used to live in cities, this was spoken about in contrast to their previous, more unfriendly, communities. One individual explained that they made the effort to welcome all the new arrivals to the village.

The amenities and services in the village helped to facilitate the sense of a sociable environment by providing meeting places. Older people tended to refer to these meeting places as informal chances to meet people for a chat, rather than planned or structured interactions:

“Many a time I will stop and talk to people, especially at the post van, you know you see a lot of people at the post van that you haven’t seen for a while and there’s quite a few of them that I know” (Participant 5, interview)

By contrast, there was an example where chance meetings had become routine and regular. The spouse of one participant went to the village shop for the daily paper and met friends at the same time:

“That’s like a social occasion for a lot of them; they go and get the paper at the same time and then having a little chat” (Participant 10, interview)

People highlighted the range of sports clubs, interest groups and events that were in the village. Even individuals who did not attend saw the availability of these groups and events as positive for the community. Many of the participants were regular members of at least one club or group and enjoyed this. Some people felt that there were not enough groups for older people, or that the community would benefit from having more.

Many people talked of village events; the village held an annual traditional celebration and there were regular fundraising events in the village hall. In addition, the sports clubs and interest groups also held social events for members.

Overall, the friendliness, groups, events and meeting places helped to foster a view of a village with a busy social life. Older people mentioned that the village had ‘lots going on’ and conveyed a vibrancy of village life. This seemed to be important to residents, regardless of how involved they were with these

elements, and fed into an idea of an overall 'community spirit' that was enjoyed by residents.

7.3.2.2 Mix of People

The mix of people in the village was seen as an important factor for having a sustainable and diverse community; however, this was framed as an area for improvement. Individuals generally acknowledged that they were part of an ageing community but also wanted residents of other ages; there was a desire for a more sustainable, intergenerational element to the village. Some recognised that younger people were leaving the village to pursue careers or go to University and that this was affecting the diversity of ages in the community. The village, however, was seen as lucky to still have a good school and this was attracting young families. Some people felt that there was a sufficient mix of generations and that this created a good atmosphere in the village.

Linked to having people of different ages in the village, was the range of occupations that working-age people had. This was spoken about with particular reference to tradespeople and small business owners in the village. The wide range of trades and small businesses was seen as particularly good to have.

The mix of people was ultimately seen as dependent on the type and affordability of housing. On the positive side, some thought that there was a range of sizes of homes, the mix of tenures was highlighted and they pointed out there was new housing in the village. There were, however, hints from others that suggested that there was a lack of affordable homes and that this was primarily affecting young people; some young people had to move away for housing and the village was potentially not attracting as many young people from elsewhere as it could.

These interlinked areas demonstrated complexity in relation to having a mix of people in the village. This was seen as important, as ultimately participants saw a similarity between a community being good to grow older in and a community that was good for everyone. The mix of people in the village was therefore

linked to sustaining the community for the future through it being able to reproduce itself.

7.3.2.3 Caring Environment

For some participants, the village formed a caring environment with both neighbours and services contributing. There was a sense amongst those that mentioned it, that their neighbours were looking out for them. This did not necessarily translate to regular support, but did provide a feeling that help was available if needed. One person described the caring environment as:

“Friends who look out for each other and if your bedroom curtains aren’t open by 10 o’clock, there’ll be somebody who’ll keep an eye” (Participant 3, focus group).

A member of the focus group echoed this sentiment and both gave anecdotes about days where their usual routines had changed and neighbours were concerned for their safety. Other people gave examples of neighbours offering help in times of trouble, such as towing their car home after an accident or proposing to pick up shopping in icy weather.

On the other hand, people also mentioned offering support to their neighbours. The regularity of these tasks ranged from daily, for example picking up a paper for a neighbour with limited mobility, to weekly such as giving a lift to church, to occasional. Participants helped with a wide variety of errands including gardening, lifts and shopping.

Examining the support offered and received by neighbours together, some common factors are clear. The examples given during the fieldwork suggest that support is focused on practical tasks that were convenient or quick for the giver. This is not to diminish the effort or impact of this form of neighbourliness as receivers seemed very grateful. However, it does highlight the limitations of neighbours for providing the range of support that a person could need, such as emotional or care support. Whilst some older people gave examples of being both a receiver and provider of support, this was not framed in terms of

immediate reciprocity. There were no examples of 'tit-for-tat' support, however some people did talk about village life as "helping one another" (Participant 15, focus group).

Services in the village were felt to be inclusive and to have a 'social conscience'. People expressed a sense that the village services were doing a good for the village and they had a community focus. Many people mentioned the pub; they were pleased to have a good pub in the village (especially as there had been recent periods of poor management and closure) and this offered a popular pensioners' lunch.

Participants who had experience of public transport (including community transport) noted the willingness of drivers to help their customers. Community transport drivers were trained to support vulnerable or disabled customers. In addition, both services had drivers who were willing to be flexible to enable people who were struggling to continue to use their services. This helpfulness was seen as facilitating independence:

"And another time, in the bad weather, there's a very old lady, quite dodderly really from [nearby village] and he [the driver] stops at her door so she can get on and off and just pop into home. Well that's a personal service that's really, really good and it means she can still use the bus to do her social work, I mean her social activities, meeting people and do her own little bit of shopping, keeping her independence" (Participant 12, focus group).

The kindness of the mobile library team was also praised. It was noted that the library offered computer training and staff would find information, using their own computers, for customers even if it was not library related. The team also offered a home service for people who could not get to the van. One person saw how beneficial this was for a neighbour who was unable to walk to the mobile library:

“They bring [neighbour] a selection of books to the house and they chat to [neighbour] about what types [s/he] wants and how many books and things and they actually bring them to the house for [them], so that is excellent, isn’t it (Participant 10, interview).

The willingness of both neighbours and village services to support the residents helped to create a caring environment in the village. For some, this was seen as a normal part of village life, which might have led to some participants not reporting similar examples. Overall, the examples given were centred on practical tasks and occurred at the inter-individual level, rather than being community wide.

7.3.2.4 Sense of Belonging

Across the board, participants relayed their feelings of belonging in the village through a wide range of positive experiences. Most either stated or intimated that they enjoyed living in the village and there was a sense that people ‘felt at home’. The examples and anecdotes around this enjoyment linked to the social environment in the village. Residents noted that they liked to join in with the clubs and groups in the village; this was often mentioned in relation to moving to the village and wanting to fit in and meet others. Having friends in the village was also seen as a positive aspect of living in the village that seemed to make participants feel included.

For residents who had lived in the country all of their lives there was a sense that they were keeping to their roots. For some, village life was all they had known and they were very settled; a few had family and good friends living nearby. One person highlighted this attachment to village life in the decisions about moving:

“Now I say [spouse] has always been a village person and I personally would have moved into [the nearest town] because we’re both reasonably, he was reasonably healthy until [medical event] but you never know for how long and it would be near the services, you see. But

we looked around there and [spouse] said ‘I can’t live here, I can’t’, we couldn’t find anything in [nearest town]” (Participant 10, interview)

This example between a couple seems to also be reflective of intrapersonal choices too. Others who had lived in the local area or village all their lives did acknowledge that the village was imperfect, but their roots were more important.

One of the more explicit ways that people across the board demonstrated their attachment to the village was to identify themselves as being part of a (sub)group. Some saw themselves as ‘country people’; this seemed only to apply to those who had lived in the countryside all their lives. Others felt they were a ‘village person’ and some identified as village ‘newcomers’ (even though a few had lived in the village for a considerable time). Where a resident’s sense of belonging was to a sub-group of the village, this was positioned in relation to being an ‘insider’ to one group and an ‘outsider’ to another.

Alongside a sense of belonging, some people also suggested that there was a sense of division. There were examples of relative newcomers to the village feeling that there was a divide between them and long-term residents. This manifested in hostility to newcomers when changes in the village, or with groups and clubs, were mentioned or tried. From the other side, there were suggestions that long-term residents might not be as friendly to people they did not know in the village. In addition, some people highlighted that a minority of newcomers arrived in the village with no intention of taking part in any aspect of village life.

Others hinted towards less clear-cut divides within the village. There were some suggestions that people might feel part of smaller neighbourhoods, rather than the village as a whole. In addition, and linked to this, one person was concerned that there could be people in the village who were isolated from the social elements due to personal restrictions.

One particular example, that several residents commented on, was a divide between those who used the pub and those who went to the social club. This

split seems to have originated from when the village was without a pub and the sports and social club filled the service void for some residents. Since the pub reopened (with previous owners) there appeared to be competition for customers as the village residents chose where to go. This rivalry between establishments was felt to have finished, but the social divide of where people preferred to go, remained; this division seemed to fall between long-term residents and newcomers.

The general sense of belonging, and a sense of division, was felt amongst the majority of participants. In some cases, a sense of belonging to one group necessitated a feeling of exclusion from another; group memberships were not overlapping. Negative feelings around a divide, whilst not felt by all participants, were experienced by groups on all sides, suggesting that no one group felt particularly excluded.

7.3.3 Concerns for the future of the village

Participants, across the focus groups and interviews, raised several concerns. These concerns varied between individuals and groups and also in their nature. They were generally phrased as concerns affecting the village in the present; however, the implications extended to the future.

Many of the issues were about the impact on others and the community as a whole. Participants were raising issues of collective interest, rather than personal points.

7.3.3.1 *Concern about the impact of changes to village services*

When participants were asked their opinions on what they saw as the impact of service change in their village, responses tended to focus more on the effect on others in the community than necessarily themselves. Most raised concerns about the consequences of the bus service reductions, which at the stage of fieldwork were not finalised, even though only a minority used the bus service regularly. This could imply some were worried for their own, future bus use as well as having concerns for others. It was generally thought that a reduction in

the frequency of buses would make travel more difficult for the people who relied on them. The consequences of this were suggested as increased inconvenience, such as having to wait longer for return journeys and reducing people's freedom of travel as people could be 'stuck' in the village. Some participants hinted at concerns that a reduced bus route could lead to isolation for those reliant on them. These worries link with feelings noted before, that transport is crucial for those living in a village and participants were aware that this important service had been eroded.

The Post Office closure from the village shop and move to a mobile van sparked a range of complaints and concerns. These related particularly to the impact on older people, who were seen as the Post Office's main customer base. The main complaint was that the mobile van meant that customers had to queue outside, which was a problem in poor weather:

"Winter time is awful, I mean for myself it's all right, but I've seen elderly people and they're stood shivering" (Participant 15, focus group)

One person highlighted that the van was difficult for people with limited mobility to access:

"I've watched people climb up and down those steps and it's not easy and if you're in a wheelchair you can't actually get to the counter"
(Participant 12, focus group)

Problems stepping in and out of the van were witnessed in the recruitment stage of the project and it was also noted that people in wheelchairs (accompanied by others) tended to be left outside the van while their business, or that of the accompanying person, was dealt with.

In addition, some saw the Post Office van as unreliable. This was a particular problem as many felt that people did rely on the van being there, especially for access to cash. One resident highlighted that the Post Office (when it was in the shop) was particularly valued for the broad range of services it offered, including

financial services. In this way, the Post Office acted as a service hub protecting the villagers from the lack of a range of other services in the village, such as a cash point or bank.

Whilst the Post Office van still offers access to financial services, albeit for fewer hours per week, there were hints that some felt uncomfortable about the lack of privacy. Privacy was particularly a problem when it was cold or raining as people tended to want to wait in the shelter of the van, but this meant the van was busy and personal business could be overheard.

From a wider perspective, participants felt uneasy that the move from a Post Office branch (in the shop) to the Post Office mobile meant the loss of a meeting place for the village. The Post Office van was not seen as a replacement meeting point, as it was weather dependent. As one person noted, having sociable places is important for keeping the community together.

Members of one of the focus groups, who were taking a longer-term view of change in the village, noted that the loss of services meant there were fewer local jobs. They felt that the services in the village did employ local people but the general lack of local employment meant that people, especially young people, were moving away from the village for work. In this vein, the reduction of local services had the potential to affect the mix of people the community could support.

The loss, and lack, of services in the village also affected the impression of the village. An individual commented that the village was quiet in the daytime as people leave for work:

“I mean you look out in the streets some days and there isn’t a soul, there isn’t a car because they don’t work in the village like they did”
(Participant 14, focus group)

In addition, some were concerned that an ex-service building was not being maintained by the owners and was going to slide into disrepair. Combined,

these two elements did not seem to give a good impression of the village. Conversely, it was highlighted how the pub reopening had helped to make the village appear more busy and lively. The undertone to these comments hinted at people worrying that their village appeared to be a lacklustre, retirement village. This could be a concern as this view threatened the vibrancy of the village, which was valued highly. These private concerns of the participants were therefore in contrast to the 'public' view of the vibrant village outlined earlier; they also reflect a sense of concern for others, linking to neighbourliness and a sense of belonging to village life explored previously.

7.3.3.2 Concern about the stability of remaining services

The bus service, which at the time of fieldwork was undergoing changes that were not finalised, was also a source of concern. Rumours had circulated about the extent of the proposed changes from halving the frequency of service to losing two journeys per day. Anxieties were fuelled by the complete loss of bus services from other villages in the local area and unconfirmed reports that bus passes would not be accepted on a local route.

In the context of an unsettled picture, the future of the bus service was discussed widely. Some highlighted that the current changes were part of continued reductions to this service in the village. The thought that there would continue to be a decline was also aired. Participants were concerned that the future of the bus service was in jeopardy as so many villagers drove and the buses were often not full (and sometimes empty).

The village shop had reduced in size, and limited its range of stock, in recent years. Some felt that this was due to the owner running the shop as a way of keeping busy rather than as a competitive, commercial concern. However, others attributed the contraction of the shop to the loss of the housed Post Office. The Post Office (when it was in the shop) served the village and local area and this attracted customers from outside the village to the shop. Residents, therefore, saw the Post Office move as taking away customers from the shop.

This concern that the stability of one service was affected by another, was echoed by an individual who highlighted the potential effect of development proposals on the nearest town. One proposed development, on the edge of town, was a worry (and had sparked local action) and the individual felt that it would reduce custom in the centre of the local town. A further person noted that changes to public transport in the local area also might affect the stability of the local town's businesses, as shoppers might not be able to get there.

In contrast, it was indicated that careful development in the local town could help to attract people, if the town could offer something special in the local area. One resident mentioned that having thriving tourist businesses in the village was beneficial for the residents as the extra people helped to sustain other village services.

Overall, participants seemed to take a 'use it or lose it' approach to village businesses. This was seen as the main way people could sustain the services in their village. This was also one of the reasons for disappointment over the closure of the static Post Office, as people felt it was well used.

Amongst some older people there was a resistance to forced change. One participant in particular, noted on several occasions that residents were having to put up with change, suggesting that change was not welcomed. They linked this feeling to keeping their independence and a self-reliance, which they were proud of and deemed part of their heritage. This attitude was reflective of the coping approach to service change. An example of this is the rise in online access to services; whilst this was mostly welcomed on principle as an option, it was felt that it needed to be recognised that this was not wanted by all, or even an option for some. I was given the impression that the participant had concerns that the trend for services moving to 'digital by default' had the potential to jeopardise the independence of some older people who were not used to this technology.

People who had lived in the village or local area for their whole lives, predominantly highlighted this feeling. Some newer residents saw this attitude

as obstructive when they wanted to 'improve' village amenities. From the long-term residents' viewpoint, forced change had the potential to undermine their chosen lifestyle, which was fiercely guarded.

7.3.3.3 Concern about weakening community cohesion

There was a widespread concern amongst participants, but particularly amongst those involved with the running of groups, that it was becoming increasingly difficult to engage people in village clubs, groups and events. Again, this is in tension with the 'public' account of the village's vibrancy.

Some found that it was challenging to build interest in new groups, even if there had been a general request for it, with few people actually coming or groups sustained by people from elsewhere. One person set up a social group for older people in the village. Friends helped and they offered to collect people so that potential attendees were not discouraged if they struggled to get to the village venue. On the day, however, the only people who attended were the organisers.

With existing groups and clubs, people noted that it was demanding trying to build (or just sustain) the membership. It seemed as though there was a core of people who were a part of groups and clubs in the village and others who were unwilling to engage, even if this involvement was on an ad hoc basis (for example, by contributing to the village newsletter). Some residents also noted that it was challenging to encourage people to be on committees, to keep groups running.

Difficulty engaging people in village clubs and groups had a negative, cyclical effect where poor attendance reduced enthusiasm and affected attendance at the next event. One person thought this was a particular issue for new people to the village:

“Then you get other people who are keen to have a go and join in things and when they do they find that, you know, well there is nobody doing it

either, so they don't bother anymore. So you do get this sort of knock-on effect" (Participant 11, interview)

As a result of poor engagement, some sports clubs and interest groups had stopped in recent years. In addition, some village events (such as an annual sports day) had also ceased due to an unwillingness to take part. It was also noted that problems securing the necessary insurance could mean that events were halted or people were put off from planning them, as this added an additional barrier.

One person, who was not involved in village groups or events, gave several reasons for this. S/he stressed that s/he did not want to go out in the evenings when it was dark or in the winter. In addition, some of the events did not suit his/her lifestyle, for example not wanting to eat much at lunchtime meant s/he did not attend lunch events. Finally, s/he did not want to go to groups aimed at older people as s/he did not want to be thought of as 'old'.

A further person, who was a member of various clubs and groups in the village, stated that s/he had chosen not to be on committees any more. S/he had previously been on committees but found them difficult to leave and the position became 'lifelong' and time consuming. When s/he moved to the village, s/he took the opportunity to leave his/her existing committees and pledged not to join new ones, but was still an active member in village groups.

Others generally associated a decline in community interaction with the rise of technology. This left some fearing for the future of the community, especially when they compared their experiences with those of their parents. They felt that community spirit had weakened between their parents' generation and their own and worried what the future might bring if this downward trend continued.

7.4 Discussion

A recurring theme from the document review was concern for the future of services in rural areas as government support for, and community use of, some rural services wanes. This, moreover, could herald a cyclical effect if changes to

the opening hours of the Post Office or reductions in the frequencies of buses led to fewer people using these services. This could, in turn, lead to additional cuts to services or ultimately the closure of services. The linked nature of services could also mean that one closure in an area could have a negative effect on the viability of other local services. The potential for, and concern about, the demise of rural services appears to contradict and undermine broader policy goals at the district and county levels. For example, within the Local Transport Plan (2010), ability to access services was associated with equality of opportunity; this would suggest that public transport has a key role to play in providing equitable access and that cuts to services could have implications for equality. Additionally, the documents portrayed the impact of service cuts as falling unequally, with the potential to affect older people and those with limited transport options more greatly than other population groups. Combined, an interpretation of the document review could suggest that service cuts are undermining the principle of equality set out at the county level and older people could be a group that is disproportionately affected by the changes.

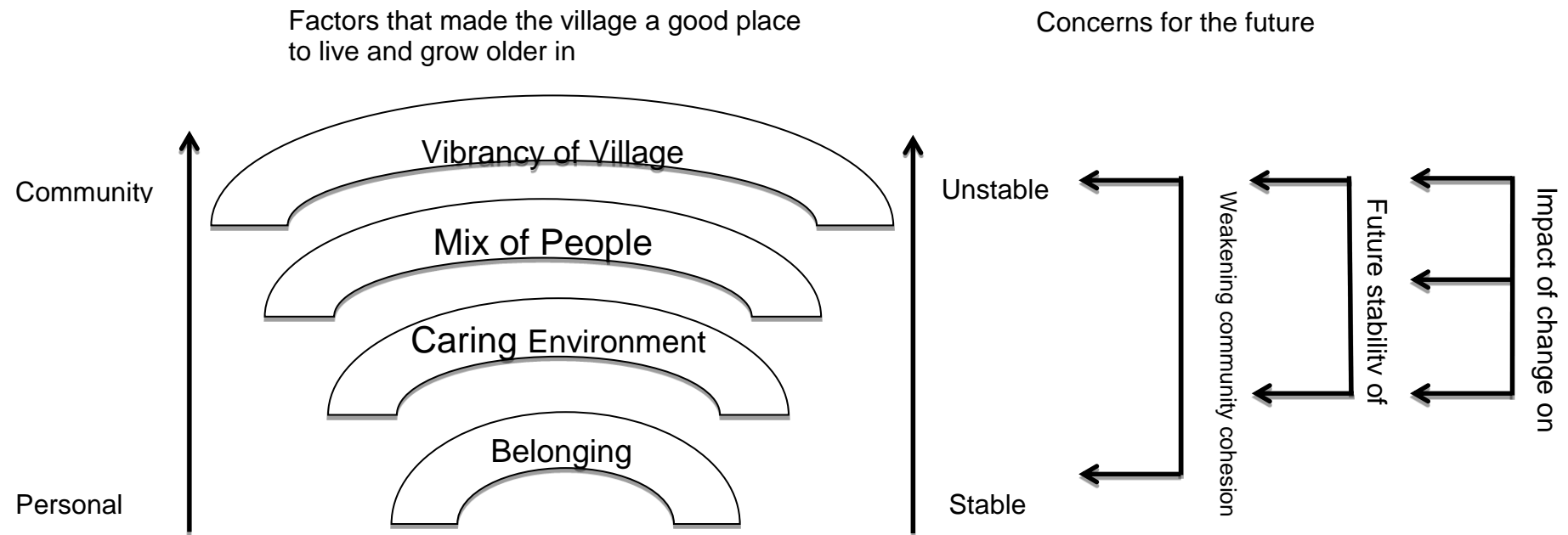
Further to this, the District Plan (2007) links poor transport services with the risk of social isolation and the draft county community plan has an objective to address isolation. The broader policy goal to reduce social isolation is undermined by service cuts if this reduces a person's ability to access services or erodes the social role of services. It has been noted that services can play a key social role in their communities which, if subjected to cuts, could negatively affect members of the community and risk social isolation.

Overall, it can be interpreted from the documents from the case site, local newspaper coverage and district and county level plans, that service cuts could have wider consequences than considered by the authors of the documents individually. It also should be considered at the broader policy level that cuts to both public and private services could affect the ability to achieve policy aims. The promotion of communities being involved with the design and delivery of services could be weakened by not considering their views when making

service cuts. Aims of equality and social inclusion can be more challenging to achieve if access to services is made more difficult.

Reflecting on the range of personal experiences and perceptions of the participants on what made the village a good place to grow older in, and the interactions with their concerns for the future, it was possible to construct a model. This is represented diagrammatically in figure 7.2.

Figure 7.2 Participants thoughts around what made the village a good place to live and grow older in and where their concerns interacted



The model represents the range of accounts participants gave. However, there was not necessarily a consensus amongst these different accounts.

The themes relating to what made the village a good place to grow older in seem to link in interrelated, nested layers. The vibrancy of the village provides the overarching context for the feeling of a community spirit. At the next level, the mix of people was deemed a necessary precursor for sustaining the sense of community and allowing the village to reproduce itself. The caring environment appeared to be enacted at the neighbourhood, rather than village, level and provided the concrete examples from the participants of how a supportive community functioned. At a more personal level, participants expressed a sense of belonging, which was linked to the wider layers of the community.

From the accounts of the participants, at these outer layers, the ideas were more abstract and linked to perceptions of what was happening. At these levels, residents were not necessarily talking from personal experience, but the 'sense' of their community was important. The abstract 'sense' of community being important to their own experiences of living and ageing in the village, made the outer layers more unstable compared to their sense of belonging (although this was linked to the vitality of the wider community).

The concerns for the future of the village appear to cluster predominantly at the outer layers. The relative instability of these levels, and a 'sense' rather than experience, could be making these layers more vulnerable to change and therefore concern. The vibrancy of the village has the potential to be undermined by weakening community cohesion, future (in)stability of services and the impact of change on the community. The mix of people could be affected by concerns identified relating to the impact of change on the community. The future of the caring environment in the village linked to concerns about the future stability of services and the impact of change on the community. Finally, the sense of belonging of older residents could be affected by weakening community cohesion.

The findings of the case study, and the model, link to existing areas of the literature. The importance of having informal meeting places to facilitate the vibrancy of the village echoes some of the principles of New Urbanism and

lifetime neighbourhoods; having public destinations provided an opportunity for social interaction in the village and this contributed to feelings of a 'community spirit'. This fits broadly with the findings of Montemurro and colleagues (2011) and Lund (2003) that while walking increased interaction, there was no suggestion that this interaction led to neighbourly behaviours (as also found by Moorer and Suumeijer, 2001). It is noteworthy that the findings have some parallels with New Urbanism (which is based on walkability theories), even though the village was arguable not particularly pedestrian friendly. This would suggest that informal meeting places can help to sustain environments for interaction, even in areas with poor walkability for residents; for the case site, the destination supported interaction separately from the journey to it.

New Urbanist and lifetime neighbourhoods also support community diversity, varied housing and local employment; this links with the value placed on having a mix of people in the case site. It was important to participants to have a community that was varied and sustainable; connections were made between community diversity and affordable housing, local employment and facilities for families.

Many of the participants seemed to be part of informal support networks with neighbours, both offering and accepting instrumental support and this helped to frame the caring nature of the village environment. The research did not aim to capture the full range of people in supportive networks, but the findings did offer some useful insights. For the most part, these networks were neighbourhood based, practical task focused and informal. Where this was discussed, neighbours were seen as integral parts of networks and this provides further weight for their continued inclusion in the networks literature (see Antonucci et al., 2004; Drennan, 2008; Dunér and Nordström, 2007; Keating et al., 2003; Phillipson et al., 2001; Nocon and Pearson, 2000; LaPierre and Keating, 2013). There were hints that neighbourly support could be particularly useful in unforeseen or urgent situations (such as examples of being 'snowed in' or having a car accident).

Whilst these support networks were clearly non-kin, the discussions did not disentangle friends and neighbours, with many people seemingly using the terms interchangeably. All the examples of supportive behaviours involved others living in the village, often in the immediate surrounding homes. On this basis, all the anecdotes related to neighbours, but some of these neighbours might be also considered as friends. There did not appear to be any distinctions between long-term or newcomer residents using different terms, suggesting that neighbours were not necessarily considered friends after a certain time living in the village. The instrumental support fits with other findings that non-kin tend to provide help with these kinds of tasks (LaPierre and Keating, 2013). Crucially, none of the participants described this support as 'care', instead hinting that this was neighbourly behaviour.

For those involved in informal supportive networks, the majority of examples given in the research were of offering help; it is possible this reflects an unwillingness to be seen as needing support. Where reciprocity featured in the participants' narratives, it was often mentioned from a long term perspective (linking with the idea of a lifetime approach from Antonucci and Jackson, 1990). The form of reciprocity seemed to be community specific and part of the culture, with people helping each other. There was no suggestion that the reciprocity would extend outside the village if a person were to move away, which is suggestive of neighbourly support rather than friendship.

The participants' sense of belonging seemed to relate to being part of a group (either formal or informal). This appeared to help people move from their 'newcomer' status to feeling like a village person and ensured long-term residents remained part of the community. Some people intimated that this was not necessarily an automatic or easy transition and highlighted the differences felt between the newcomers and the long-term residents. Others, however, mentioned being welcomed or 'fitting in' quickly. A possible reason for this disparity of accounts could be due to the characteristics of the people involved; whether they were already a 'country person' or used to an urban lifestyle. There are hints in the data that country people had a smoother transition into the case site's village lifestyle. Crucially, becoming accepted as a member of

the village was not seemingly linked to participation in village life (although the non-participation of newcomers was frowned upon). A sense of needing to prove yourself in order to become a village person could account for why some kept their newcomer status and some felt they had lost theirs (irrespective of their length of time in the village).

The concerns regarding the potential weakening of community cohesion could have a negative effect on the community residents' sense of belonging to the village. This could become more difficult if fewer village events and groups are sustained, as these provided a way for newcomers to meet other villagers. Whole village groups, clubs and events may be important for maintaining a village identity and a lack of these could lead a more fractious village life based around neighbourhoods; there were already suggestions that some of the participants felt they belonged within their own neighbourhood rather than the wider village. However, the future of the village groups relied on maintaining a mix of ages in the village. A more divided village life would also have the potential to affect long-term residents, if the sense of community were to decline.

The participants' discussions around their strategies to the changes to, or general lack of, services in the village are evidence that older people were manipulating their involvement with the service environment. This lends support to the idea that individuals can exercise their agency in approach to the environment component of person-environment fit (Wahl and Lang, 2004).

In general, the data endorse the congruence perspective on person-environment fit (see Carp and Carp, 1984; Kahana, 1982 for an explanation and see Menec et al., 2011; Iwarsson et al., 2009; Slaug et al., 2011; Thomése and Broese van Groenou, 2006; Phillips et al., 2010; Cvitkovich and Wister, 2001 for empirical research). It was rare for people to discuss their personal capabilities in relation to service environment change, instead focusing on the environment as the facilitator for their independence and suitability of the village for ageing. This underlying argument was also raised in concerns linked to the impact of service change; some were worried about the impact of change on members of

the community deemed to be vulnerable in some way. Residents implied that more vulnerable community members might be less able to adapt to increased environmental pressure; crucially, however, concerns about adaptation were not framed around decreasing personal abilities. The overall suggestion of a congruence approach to person-environment fit, in the context of the case site, is that the environment is the leading factor in coping with change (resulting in 'fit') rather than personal capabilities. This has important ramifications for the concerns about the future stability of services as the supportive elements of the service environment could continue to be eroded.

Overall, the development of the model (figure 7.2) and the key themes of the analysis were surprising. The topic guides for the discussion groups and interviews focused on the impacts of service change; however, participants highlighted change in relation to village life. The model produced as a result of the analysis overlaps with existing theories of place attachment. This could suggest that the older people in the case site were accentuating a complex balance between requiring services and feeling attached to their village.

The model has similarities with Burholt's (2006) conception of place attachment, developed through research across rural settlements in an area of North Wales. The study identified seven themes that collapsed into four, overlapping and interrelated domains of social, physical, psychological and temporal attachment; the seven themes linked with more than one of these overarching areas. Of particular relevance to this project, Burholt (2006) identifies access services and facilities that can enable basic tasks to be completed as an important facet to place attachment (using the term appropriateness of the environment). Further pertinent themes related to having informal sources of support, through family and neighbours (social support) and feeling like a member of the community, including being part of groups and having social contacts nearby (social integration). Burholt (2006) also highlighted that place attachment can have a historical perspective, where residents enjoyed social benefits through being a longstanding member of the community; this was more common amongst people who had lived in the area for a long time, but was not exclusive to this group. Burholt's (2006) research also identified that attachment to place was

associated with people liking where they lived (general location satisfaction), enjoying the natural beauty and safety of the area (aesthetic and emotional components of location). Relocation constraints acknowledged an opposing concept to place attachment, where barriers to moving ensure people stay rather than necessarily doing so of their free will.

Smith's (2009) study of deprived, urban neighbourhoods in Manchester and Vancouver also overlap with some of the findings of the case site. Smith (2009) identifies six domains of place attachment, four of which are closely related to those of Burholt (2006) and two that are more likely associated with urban areas. Physical attachment and area knowledge allows the experience of an area to aid the residents' management of the local environment, in spite of barriers. Informal social interactions in the neighbourhood helped to develop social attachment; this domain could be enhanced by access to public spaces, notably parks, which offered a setting for informal meetings and enjoyable activity out of the home (Smith, 2009). For longstanding residents, there was the potential for historical attachment to place, through shared memories of living in an area over time. Interestingly, where this long-term attachment was missing for residents who had lived transiently, due to their life history, this lack of attachment did not negatively affect them. Finally, for some residents (more commonly amongst certain ethnic minority groups) religiosity and spirituality could act as a buffer to a poor environment, as this was sometimes viewed as out of their control (Smith, 2009).

From the model based on the analysis of this case study (figure 7.2), there were conceptual similarities between the factors that participants highlighted as making the village a good place to grow older in and place attachment. The vibrancy of the village links with the domains of public spaces and social attachment (Smith, 2009) and social integration (Burholt, 2006) through the value of informal meeting places for social interaction, the availability of interest groups and feeling that the village was friendly. The caring environment overlaps with areas of Burholt's (2006) social support, with both including informal support networks. Finally, belonging has conceptual similarities to social integration, historical perspective (Burholt, 2006) and historical

attachment (Smith, 2009) as perceiving oneself as a member of the community and 'keeping to your roots' were highlighted as elements that made the case site village a good place in which to age.

There are some areas of contradiction and additional elements that this study can contribute to those of Smith (2009) and Burholt (2006); this could be due to the broader aims of the case study. The vibrancy of the environment suggests that local services are important places of community interaction, expanding Smith's (2009) domain of public spaces that focuses on parks. The caring environment highlighted the role of neighbourly support and the importance of reciprocity; participants positioned themselves as members of networks, rather than the receivers of support. This is somewhat in contrast to Burholt's (2006) social support, which refers predominantly to kin networks offering care. Further, in the social domains, the conception of belonging in the case study analysis hinted towards complexities in feeling a member of the community, something not explored by Burholt (2006) or Smith (2009); older people in the case site did not necessarily feel part of the village, but sometimes as members of smaller, sub-groups. Finally, the case study analysis suggests that a broader view of temporal elements, such as historical viewpoints (Smith, 2009; Burholt, 2006) could be expanded. Time related to concerns for the future and what people felt made the village a good place to grow older in. From the findings, the social and physical environment was viewed as changeable; participants were forward-looking about their village. These concerns provided hints about where place attachment could be undermined alongside a sense from participants that a 'good place to grow older' was fluid.

Across the findings of the case study, there were some important and recurring themes. Services had a social role in the community, leading to social impacts resulting from their change or closure. This was reflected in the newspaper coverage of other villages in the local area. The broad social environment of the village, including the social implications of local services, was important to making the village a good place to grow older in. Further, the overall case study analysis suggests that village and local services are part of an interrelated web; closure or change to one service can have ramifications on the future of

another. This could create a cumulative impact of change, which could affect the social atmosphere in the community.

From both the document review and fieldwork, there were hints that the resources of older people were assumed or taken for granted. Widespread cuts to public transport and high levels of car ownership seemed to suggest a view that older people had access to private transport, for example. However, the fieldwork provided some evidence to challenge this assumption; some of the participants did not have cars and only a minority mentioned online access to services. The diversity of older people in rural areas has the potential to be overlooked by both national and local policymakers, who may be relying on access trends of the wider population.

This chapter sought answers to the research aim of exploring the impacts of service change on older people living in rural communities. The findings from all sources of the case study suggest that there may be social ramifications to change, that the sustainability of remaining services could be affected and that the outcomes could be diverse, with disadvantages being cumulative. The following chapter draws inferences from across the empirical evidence of this project and highlights where there may be implications for policy and research.

8 Discussion: Meta-inferences across data sources and implications for policy and research

This chapter discusses the key points from the research overall and highlights issues that have implications in the wider research and policy context. The chapter is split into two sections. The first section draws together the findings from the different data sources and analytic techniques used to answer complementary research questions. Building on the empirical findings within chapters four through to seven, I draw meta-inferences from across these findings using a broader lens informed by the knowledge gained at all stages. The second section discusses where findings from the empirical chapters and meta-inferences have implications for current policy approaches or future research.

8.1 Meta-inferences

8.1.1 Evidence of the impact of the Post Office programmes of change

The perspectives offered from the different data sources provide complementary evidence on the impact of the Post Office's programmes of change. The data from the Commission for Rural Communities (CRC) hinted at a coordinated, national change between the observed time points of 2000 and 2010. The results showed step-change increases in the distances from output areas to the nearest post offices during this timeframe, across the full urban/rural spectrum. The greater distances from output areas to post offices are indicative of branch closures. The data from the Post Office Freedom of Information response (2012) corroborates the suggestions of change made from the findings of the CRC data.

The Post Office 2003-5 Urban Closure Programme and the 2007-9 Network Change Programme resulted in the widespread closure of Post Office branches; the Post Office compulsorily closed 3,768 branches in England, as part of these programmes. These closures are the most likely explanation for the increased distances to Post Offices, highlighted by the CRC data. In addition to closures, the 2007-9 Network Change Programme included implementing alternative

forms of service provision (outreaches). The distances noted in the CRC data would have been affected only by the Post Office closures and do not include changes to the type of service available. The analysis of the Post Office Freedom of Information response (2012) adds a further source of potential impact, namely changes to the nature of service provision with unintended (and unexplored) negative effects.

Evidence from wave 2 of the English Longitudinal Study of Ageing (ELSA) indicates that the Post Office 2003-5 Urban Closure Programme could have affected members of the nationally representative sample of older people. Thus, analysis for this ELSA wave found that respondents living in urban areas were more likely to report that they found it difficult getting to the post office than rural participants. Data collection for this second wave fell towards the end of the Urban Closure Programme. This finding suggests that older people in urban areas had reduced access as a result of the closures that took place and the corresponding increases in the distances to the nearest post offices, as suggested by the CRC analysis. The significance of this finding for capturing impact is its timing; in the first wave of ELSA there was no significant difference in access to post offices between rural and urban respondents (data collection for this wave occurred prior to the programmes of change). The Urban Closure Programme resulted in the loss of 2,113 urban Post Office branches in England. Waves 4 and 5 do not demonstrate a significant difference in access between rural and urban older people, following the Network Change Programme which closed both rural and urban branches. The likely explanation is that while wave 2 of ELSA captures the impact of the Urban Closure Programme, the Network Change Programme primarily affected rural residents. That there was no significant difference in access to post offices between rural and urban respondents in waves 4 and 5 is most likely to reflect reduced access to rural residents over this time, rather than improved access for those in urban areas.

In the case study, the change from having a Post Office branch within the village shop to a mobile outreach service was a source of anger; the participants considered that the branch was well used and supported. Findings from the case study highlighted problems associated with the outreach model;

negative impact on the social environment and concerns over the shop's future. The Parish Council regularly requested that the permanent post office be reinstated. Local newspaper coverage mirrored the frustration felt by case study participants. Newspaper articles reported local residents fiercely contesting closures and service provision changes in some areas (including the case site), with some long-running campaigns.

The range of data sources all point to the impact of the Post Office changes on the lives of rural residents, offering a more complete and coherent picture of how these were experienced. The closures are likely to have caused customers longer journeys to their nearest post office. The first wave of closures, focused on urban areas, may have led to older people in urban areas finding access to post offices more difficult than their rural counterparts. The implementation of Post Office closures and outreaches in rural areas caused anger about the lesser service on offer to older people in the case site and suggestions of a similar response in the surrounding area. The range of evidence available highlights the different ways that the Post Office changes could have had an impact on older people living in rural communities.

8.1.2 Evidence on the interrelatedness of services

Both the Post Office Freedom of Information dataset and the case study highlighted examples of the informal and formal reliance of rural businesses on each other. Information about outreach services contained in the decision area booklets provided as part of the Post Office Freedom of Information response (2012), demonstrated a link between the Post Office and other services. The Hosted and Partner outreach service delivery options rely on another service providing the Post Office services or permitting use of their premises by the Post Office (Post Office FOI response, 2012). While there is potential for linked services to strengthen each other, equally, the failure of one could adversely affect the sustainability of the other. This latter scenario could be more likely to occur; regular reasons cited in the decision rationales for providing Post Office services by outreach was few customers or non-profitability (or both) (Post Office FOI response, 2012). Teaming up with another service, which could

reasonably be experiencing similar problems associated with rural service delivery, could place both services on shaky foundations. If the services do benefit from being together, there could still be the potential for problems if one service were to terminate the arrangement. Evaluations of the long-term implications of the Network Change Programme provide evidence of this. In a case study by Consumer Focus (a consumer advocacy group), it found that in 10 Devon villages, closure of a Post Office branch located within a village shop resulted in the later closure of the shop (McAnulty and Brown, 2011). Case study respondents in my study described how such a process could occur. The post office used to be in the village shop and, since the Post Office's move to a mobile outreach, the village shop had suffered: reducing in size; and offering a more limited range of stock.

Generally, the case study highlighted that rural services can be part of an intricate web of businesses and services that rely (directly or indirectly) on the presence of other local services. For example, the tourist businesses in the case site attracted new customers to the village, who used the shop and pub. These seasonal bursts of extra customers helped to sustain the services for village residents throughout the year; however, the case site had undergone phases of multiple service losses in the past. This principle similarly applied to transport services. Reductions in bus routes, or losses in some villages in the surrounding area, had the potential to affect the number of customers going to the local town. These examples from the case site demonstrate the cumulative and interactive effect of service provision means that there is the potential both for services to bolster each other and to fail with each other. The interrelated nature of services in the case site links with Bosworth's (2012) finding that rural businesses may be supportive of each other, as part of an informal acknowledgement of their shared challenges. However, the evidence in my study highlights more fundamental linkages between services, with success and failure potentially intertwined.

The analyses of the ELSA and CRC data sources did not provide insights into the linkages between services. This is not surprising, both sources of information examine services independently and with limited (or no) scope to

provide the relevant context. The analyses did allow questions to be raised about assumptions relating to the overall service environment. In the CRC analysis, it was clear that the number of supermarkets increased between 2000 and 2011. This is not enough evidence though to suggest that access has improved for basic items. It is possible that an increase in supermarkets, in some areas, could correspond with the closure of smaller shops. Examining changes in different services as separate phenomena can provide only a limited perspective, compared to viewing services as interrelated and interdependent on one another.

8.1.3 Evidence on the impact of alternative forms of service provision

It is reasonable to think that different forms of service provision would have different impacts on the communities they serve. Evidence from the consumer focus review of different types of Post Office outreaches supports this view; different forms of outreaches presented different concerns and resulted in different recommendations (Consumer Focus, 2009). The Post Office Network Change Programme did not appear to have considered the consequences of change on linked services. The decision booklets supplied as part of the Post Office Freedom of Information response (2012) suggest that the decision to create Partner or Hosted services was driven purely by the willingness of local business in the area to facilitate this; there does not appear to be any other rationale behind this decision. The decision booklet information also suggested Outreach services were open to changes (and downgrades) in service delivery options over time, making alternative forms of service provision an important issue to consider. There were hints in the case site that the outreach provision could change in the future.

The Post Office mobile outreach operating in the case site had more limited opening hours than the branch it replaced. Participants highlighted that the post office (when it was in the shop) used to be busy and popular; this contrasted with reports from the Post Office mobile outreach staff that the service can be very quiet on certain days, also noticed in my observations. This is not surprising as participants mentioned many barriers to using the outreach,

including opening hours being during traditional working hours (further limiting the potential number of customers from the village). The change of service provision seemingly resulted in lower usage of the service, which has the potential to, in turn, lead to a further reduced level of service. A similar dynamic occurred in a village in Devon, examined as part of a Consumer Focus review, which equated poor usage (due to service unreliability and inconvenient operating times) to a halving of the outreach hours (McAnulty and Brown, 2011).

One general alternative form of service provision is through the internet. Access to services via the internet has the potential, in theory, to eradicate some of the problem of distances to services for rural residents. In practice, there is evidence from this project that older people may not be using this option. A minority of participants used the internet for accessing services in the case study, but the majority did not mention this (instead referring to physical access). In the analysis of ELSA, internet non-use was not a significant predictor of access difficulties (although the survey question did refer to physical access). The findings from these data sources hint that older people may prioritise physical, over digital, access to services. This is reflective of Ofcom's (2014) survey results, showing that older people were the least likely group of internet users to shop or bank online, alongside the estimation that fewer than half of older people are current internet users. The findings of this project, in conjunction with the existing results, raise concerns about the appropriateness of the 'digital by default' agenda for this population group (see Cabinet Office, 2012).

The study provided clues that some older people may be using the internet instead of, or in addition to, going to shops and banks; however, the evidence on the impact of digital access is limited. There is insufficient evidence of the impact this is having. In the case study, only one participant discussed online shopping; although this was a useful insight in its own right, it cannot be seen as reflective of more widespread use amongst older people in the case site. Further, the ELSA question relating to internet use was limited in its scope by not probing what the internet was being used for. As the findings of Ofcom

(2014) highlight, using the internet is not a sufficient indicator for assuming online access to services.

8.1.4 Evidence on the importance of transport

The analysis of the CRC data demonstrates that the distances to the nearest banks or building societies and post offices have increased since 2000. As these distances are calculated using road networks, they cannot be generalised to suggest the distances for pedestrians. It is possible that footpaths are not alongside the road, the distance by path could be shorter or longer or a path may not exist on the route. Where a path is present, the journey may or may not be walkable; this could mean people have to use transport for short distances to services. In addition, the health and mobility of an individual could also make a short distance difficult to walk. For example, a case study participant drove from the edge of the village to the shop and post office due to poor health, which made it unfeasible to walk the short distance. Further, the ELSA analysis highlighted that difficulty walking a quarter of a mile unaided increased the odds of finding it difficult getting to services. Both of these examples highlight how short distances to services may not be walkable for some older people.

There were hints in the ELSA analysis that the availability of transport was associated with access to services that were likely to be further away (such as supermarkets and shopping centres). Not having the use of a car or public transport and being unable to walk at least a quarter of a mile were consistent predictors of finding it difficult getting to services. It therefore seems that distance alone is not a sufficient proxy for the accessibility of services for older people.

This may provide some context for why the case study participants saw transport as a necessity; in most examples, this was a reference to private transport. It was unclear from the findings whether this was a perceived or real necessity, especially as there was a bus service available. Car-user participants implied that public transport was a back-up option, although other participants used this as their main form of transport. Previous studies have highlighted the

view of private transport as the default mode of travel, with public transport as a fall-back (see Gray et al., 2001; Nutley, 2005).

Whilst it might appear that older car users had most control over their transport situation, this does not take into account the changes to driving that older people may initiate. There were some suggestions in the case study that participants had started to alter their driving behaviour, for example by not driving at night or on unfamiliar routes. Changing driving behaviour amongst older people has already been noted and suggested to be common (see Help the Aged, 2008). It is therefore important to see transport as becoming increasingly restricted for people as they move into advanced older age, regardless of their preferred transport options; bus services could be reduced but so could driving behaviours, both resulting in more limited access to transport.

One possible reason for the importance placed on transport by case study participants is their suggestion that it was linked to freedom and independence (see Help the Aged, 2008). For case study participants, it was the freedom to go where they wanted, without having to rely on someone else. Speculatively, the ELSA analysis could also hint towards freedom being associated with transport; if a lack of transport options link to finding access to services difficult, then this could start to limit where people are able to go.

Overall, transport is an integral part of access to services, which is not necessarily about distance alone. Transport could link to personal feelings about remaining independent with freedom to travel, in addition to being a requirement for some journeys.

8.1.5 Person-environment fit: where is the focus placed in the different data sources?

The cohort and longitudinal analyses of the ELSA data consistently emphasised person related factors in either finding access to services difficult or experiencing a decrease in access levels over time. The analysis included a range of person-focused variables; including age, functioning, attitude and

resources. The prominence of person related factors in the ELSA results could be a product of the survey questions. The ELSA survey is interested in experiences of ageing and explaining variation (NatCen, 2012). Whilst there is no inherent reason why this could not include environmental factors, the focus does appear to be on the individual throughout the questionnaire. Additional variables, which could provide clues about the respondents' broad environment, are available by special access (such as the urban/rural classification). The location related special access variables are usually only available at a high level, with associated lower risks of disclosivity to comply with confidentiality protocols (ELSA, n.d.). However, such wide areas do not provide sufficient information about a respondent's environment to be able to assess its role in person-environment interactions of ageing.

Whilst the focus is on person related factors, it is possible that respondents could have considered environmental factors when recording their response to some of the questions. For example, a respondent could answer with 'never' to the variable asking how often they use public transport, if there is no public transport available to them. The apparent support of the ELSA results for person-focused variables as being integral to the accessibility of services may offer an incomplete picture. The skew of the ELSA questionnaire to asking person related questions, and having insufficient information as a researcher to unpick the potential environmental factors, require consideration in relation to these results.

The CRC and Post Office analyses highlight that environments are dynamic and not static. In this context, the case study findings focus on environmental factors in understanding ageing in the rural village. Participants in the case study chose to emphasise the role of their local environmental circumstances in challenging their access to services. Again, this could be only a partial assessment of the situation. Throughout the fieldwork, case study participants never referred to themselves as 'old', but did talk of other people who were older. In group settings or on their own, with a younger researcher, people may not have wanted to draw attention to any aspects of their life that had been limited by ageing.

Whilst priority was given to environment components, there were some hints of the role of person elements. Two participants discussed health limitations, with one drawing a link between this and increased difficulty accessing services. Further, some of the strategies for managing service change relied on social networks, such as lift giving or receiving. Using the framework of Cvitkovich and Wister (2001) on existing person-environment fit literature, informal networks are an area in which person-environment fit operates. Taking a broad view of person, the use of networks is suggestive of people relying on person components to address environment changes.

None of the data sources offered sufficient opportunity to examine both person and environment components together in-depth, with an open approach to where the priority of components may be placed. The CRC and Post Office datasets provide information on the environment, but do not include how those affected perceive this. The ELSA survey focuses on the person elements with limited scope for interpreting these variables in relation to the respondents' environments. Finally, the case study participants were keen to discuss and prioritise their environment but most did not draw attention to their own ageing alongside this (even in response to questions alluding to this). The polarised and skewed results in relation to person-environment fit from the individual data sources hint to a greater mix of person and environment factors overall.

Although the data sources used in this project had biases towards findings prioritising either person or environment components as affecting access to services, the mixed methods approach has explored findings in respect of both. The dominance of person elements in ELSA and the importance of environment in the case study, together lend support for the congruence approach to person-environment fit (see Carp and Carp, 1984; Kahana, 1982 for an explanation and see Menec et al., 2011; Iwarsson et al., 2009; Slaug et al., 2011; Thomése and Broese van Groenou, 2006; Phillips et al., 2010; Cvitkovich and Wister, 2001 for empirical research). This approach highlights the extent to which the environment fits with the needs of the person and acknowledges the active role of individuals to make use of informal networks (see Cvitkovich and Wister, 2001; Carp and Carp, 1984). This perspective is reflected in both the case study

findings and the ELSA results, taking account of both main findings and hints of contradictory evidence.

8.1.6 To what extent do the data sources support or refute a rural dimension to service change?

From the CRC data analysis, it is clear that rural residents are required to travel longer distances to banks and buildings societies, supermarkets and post offices than their urban counterparts. Different services experienced different levels of change, across the urban/rural spectrum. Generally, it appeared that smaller rural settlements had different levels of change from larger rural and urban areas. Overall, this data source does not provide clear evidence of a rural dimension to change; change occurred in all area types. Whilst the distance increases tended to be greater in rural areas, the change as a proportion of the baseline distance muted the conclusions of a rural dimension to change.

The Post Office analysis, however, suggested that very rural areas were particularly vulnerable to the compulsory programmes of change, although changes occurred right across the urban/rural continuum. Rural areas accounted for an important minority of closures during the 2003-5 Urban Closure Programme and very rural areas accounted for a large proportion of closures and the vast majority of outreaches in the 2007-9 Network Change Programme. The targeting of outreaches to rural areas reflects a difference between urban and rural service provision options. It therefore seems that very rural areas were particularly vulnerable to service change (outreaches) and closures, which is supportive of there being a rural dimension to service change.

In the cohort analysis of the ELSA data, the urban/rural classification of where respondents lived was rarely a significant predictor of difficulty in accessing services. In the longitudinal analysis, rurality was never a significant factor. This does not support the idea of a rural dimension to service change; however, these data are examining self-perceived access to service rather than change per se. It is possible for self-perceived access to become more difficult, but the service remain open and in the same location or for the service to change, but

self-perceived access to be rated the same. The analyses of the dataset could also reflect different expectations of services between urban and rural residents. Participants in the case study hinted at this through their discussions of their approaches to services differing from urban dwellers. This was highlighted in a previous study; Farmer and colleagues (2005) found, in relation to health services in Scotland, that rural residents were more satisfied with the services available to them than were people living in urban areas.

Both the Post Office decision booklets (Post Office FOI response, 2012) and discussions with case study participants refer to common problems with rural service delivery; low usage twinned with poor profitability. These issues, along with providing services across sparsely populated areas, are noted in the literature as being challenges for rural service providers (see Dwyer and Hardill 2011; Rural Services Network 2011; Age Concern and Help the Aged 2005). This suggests that there is a rural dimension to change as there are common issues for rural service delivery that are not associated with urban services. This at least makes rural services more vulnerable to potential change and long-term instability; the case study findings where the bus service was under review (having previously been reduced), due to low numbers of customers, support this.

Overall, there is sufficient data to suggest that there are differences between how rural and urban areas have undergone changes to services. The evidence is clear that the type of change is different in rural than urban areas (by using outreach services in rural areas), however there is not enough evidence to support a conclusion that rural areas are overall more likely to experience closures. A nuanced and holistic approach could disentangle the issues relating to urban and rural differences, taking into account objective measures of change alongside perceptions and rationales for instigating change.

8.1.7 Evidence on the impact of service change

The evidence suggests that there are both direct, immediate impacts of service change and indirect, longer-term effects. Direct impacts include service outlet

closures and changes to the type of provision offered (such as those explored in the Post Office analysis). The CRC analysis showed that closures are likely to have an impact on the distances to services. Whilst there are negative outcomes of change, it is worth noting that not all service change represents a lesser service. The CRC analysis also suggested an increase in supermarket branches, as the mean distances to supermarkets decreased over the period of interest; however, it is not clear whether this trend affected the provision of other services. It does appear that closures or new outlets opening are associated with an immediate impact on distances to services; this is predictable and expected.

Closures and changes could also have indirect impacts that may not be immediately obvious. Communities could find that they are increasingly reliant on the fewer remaining services, which could lead to a greater impact if further closures or changes occurred in the community. The interrelatedness of services could mean that remaining services in the community are less viable due to one service change or closure (see McNulty and Brown, 2011). In the case study, the change of provision of one service had an immediate impact on the community through reduced opening hours. It also had an indirect impact on the sustainability of the shop. In this instance, one planned change resulted in the community experiencing changes to two services.

Cumulative service change and closures have the potential to negatively affect the sustainability and supportiveness of a community for its residents. Case study participants, who had lived in the village for a long time, highlighted that a long-term loss of services had affected the mix of people in the village by taking away local jobs. As diversity was one of the things that made the village a good place in which to live and grow older, this is a concern. It therefore seems that the longer-term impact of change may not be wholly predictable at the time of change, but could affect the supportiveness of the community for ageing. These concerns have been raised in the existing literature, as service change is hypothesised to affect the attractiveness of a community to new residents and support for older community members (see Eales et al., 2008; Farmer et al., 2005).

The discussions of some case study participants highlighted that the impact of service change can be personal too. One participant noted that if the bus service were to reduce (as was rumoured at the time), this would reduce his/her ability to volunteer at a local charity; something that was very important to him/her. Several case study participants recognised that bus service reductions would greatly affect those who were reliant on public transport, even though participants perceived this to affect a minority of village residents.

This raises questions on the measurement and assessment of impact on communities and population groups. Clearly, numbers of service outlets and distances to services account for only some of the effects on communities and individuals. The impact of one service change may also have long-lasting consequences by starting a domino effect of change. For an individual, impact may vary depending on the type of service, their own level of use and their own resources; it has the potential to profoundly affect individuals if a service is changed on which they were reliant to maintain their independence.

8.2 Implications for policy and research

8.2.1 Different services present different challenges for access

The evidence suggests that there are different challenges for older people's access to different services. In the CRC data, distances to services varied by service type and the trajectories of change over time were not universal across services. The ELSA cohort analysis indicated that the proportions of older people who find access to services difficult differed according to the service and fluctuated across different waves. Further, different combinations of factors (partially) explained difficulty of access to banks and building societies, post offices and supermarkets; although there were some common explanatory variables. This suggests that, whilst there may be some general barriers to service access, other factors (and combinations of factors) were specific to the services explored. The longitudinal analysis of ELSA, and the finding that increased time and age did not have the same effect on all the services examined, supports this.

The case study helped to illuminate some of the reasons behind this variation. Participants often mentioned journeys and transport to services, which linked with availability of transport and issues relating to health and mobility. Access to some services involved travelling to the nearest town or further afield, whereas others were in the village. Although not all participants spoke of challenges, those who did took account of a variety of factors, some of which were specific to the service or location. Different travel considerations, how to reach a service depending on the length and type of journey, could explain some of the variation in reasons for finding access to services difficult.

The current policy approach sets expectations of accessibility for some services, notably public transport (see DfT, 2012). For other services, broad statements encompass accessibility within discussions about service provision in rural areas (for example, Defra, 2012); '[we] want to see everyone in rural England having fair and reasonable access to the services they need' (10). This research challenges this approach to older people's access to services. A combination of the two approaches might be more appropriate, setting clear expectations across rural services, taking account of common barriers to rural service access. Guidelines across services in rural areas could help to mitigate the impact of changes, such as the recent closures of bank branches classed as being the last remaining bank branches in the area (BBC, 2014b). In cases such as this, service providers should consider where their customers live and whether they could reasonably travel to alternative branches via public or private transport.

For future research, it is important to explore access to services in a way that can differentiate between service specific challenges and barriers that may affect a person's ability to access a wider range of services. Examining access challenges through the lens of a possible rural dimension could help to understand problems that may be different between older people living in urban and rural areas. A limited range of robust secondary data available exploring older people's perception of access to a variety of services currently hampers efforts in this direction of research.

8.2.2 Diversity in rural older age

Diversity in rurality and older age adds a further level of complexity to the challenges of service specific barriers to access. Although there are different classification structures for urban/rural definitions based on the area information available, there is a reasonable level of agreement across classifications. Generally, 10,000 residents is the cut-off between rural and urban. In addition, the two classification systems used in this project also include an assessment of the surrounding area. In the parliamentary schema, the overall area classification uses the proportion of rural areas and settlements that are within the constituency to reach a category (see Defra, 2007). In the output area classification, information on the density of the population in the surrounding area is utilised to decide on a category (see Bibby et al., 2005). This more detailed system for smaller areas outlines six different rural classifications. The implication here is that 'rural older people' are a heterogeneous group, as rural is an umbrella term for a variety of different settlements and areas, with different levels of rurality.

However, in addition to the diversity within the rural population, older people are a heterogeneous group. The ELSA sample highlighted differences in the age, gender, health, attitudes and availability of resources of older people. These factors were all associated with access to some services. The case study fieldwork raised further points of difference amongst older people in the small community, which could also apply in other locations. The sample represented diversity of marital status, occupational background, housing tenure and engagement with local groups. Combined, these personal experiences, traits and backgrounds affected views of ageing in a rural area.

The case study highlighted that a mixed community was integral to the village being a good place in which to grow older and to its sustainability. Diversity across age group and occupations was important. The situation of these older residents, living in a heterogeneous community, indicated that older people were part of wider neighbourhoods. The older people embedded in this community experienced varying levels of support. Some participants had family

nearby whereas others had family further afield. The culture of reciprocal support within the community helped to overcome some travel difficulties. This was partly achieved through the mix of people in the village, including retirees to the area and long-term residents. This may not be applicable to other villages that do not share a similar mix of people (such as predominantly commuter villages). In the case site, older people were active members of the village life but there were hints of problems for access planning; the mixed and supportive communities valued by the older people also mean mixed barriers, challenges and priorities in access to services. An example of this was the predominance of private transport, either through choice or as a necessity for work or education, which meant that the village's public transport was underutilised and subject to ongoing retrenchment.

For policy, rural older age masks diversity within levels of rurality, older people as a group and as members of mixed communities. The challenge for policy is to take account of this diversity with approaches that can be flexible to different (and possibly competing) needs. For research, it is important to examine areas of diverse challenges in access to services and explore where there might be commonalities.

8.2.3 Unintended consequences of service change

The evidence across my study suggests that changes to services do not happen in a vacuum; services are interrelated so changes to one may have long-term and unintended consequences, individually and over time, and in relation to each other. My study highlights some of the possible repercussions.

Service change could lead to an impact on the local community. There is the potential to affect local employment, sustainability and perceptions of community spirit. Changes to service provision in the case study led to participants noting that the village was quiet (as most people of working age had to go outside the village for employment); having a busy service environment made the village feel lively. The local service environment had the potential to affect the range of people who could move to the village and those

who could remain. Further, the village services provided informal meeting points for residents, which fed into the broader sense of community spirit. This links with the findings of Accent Scotland and Mauthner (2006) in their research into services in rural Scotland; they found that in remote communities, loss of local services was seen as the cause of lessening community spirit.

Service change could also have a social impact on older people. In the case study, participants associated transport with freedom and independence; the rumoured bus service reductions could compromise this for some older people in the village. The social consequences could also extend to a greater reliance on networks to help with access to services; in the case study, there were already examples of lift giving to other residents when public transport was not available. Further to the potential of community and social ramifications, the interrelatedness of services could mean that a change to one might affect others, as outlined previously.

The challenge for policy is to take account of the broader social and service environment, within which everyday services operate. For example, where the government set criteria for the Post Office compulsory closure and change programmes, there could have been a requirement to assess the stability of any linked services. Considering the knock-on effect of one change to other services could be a way of minimising the social and community consequences by attempting to prevent a domino effect of loss. This approach at least has the potential to limit the indirect impact of service change.

8.2.4 How appropriate is the current accessibility and rural service policy in England, in light of this new evidence?

The current national policy approach to accessibility of rural services is split into two areas; policy that examines accessibility for particular services (of relevance to this project is public transport) and umbrella policy stances related to rural areas and their economies (rural proofing). Neither approach considers services as interconnected in relation to accessibility or sustainability. Public transport accessibility policy does not take into account linked journeys in rural areas, such as needing to change routes to travel to the nearest city, nor its role in

sustaining services by transporting shoppers (see DfT, 2012). Equally, rural proofing does not formally assess the sustainability and accessibility of local services when one aspect undergoes change (see Defra, 2013c). This is problematic as the evidence from this study suggests that rural services rely on each other and changes or loss with one service can affect others. The current policy narrative therefore does not recognise the cumulative effect of loss.

By focusing narrowly on public transport or more broadly across the rural economy, these approaches do not take into account the range of factors that can affect accessibility and rural services for residents. Considering customers' experiences of usability could complement the planning and measuring of accessibility from the service perspective. This involves taking a more holistic approach to rural service policy, utilising knowledge and approaches across departments alongside local information. In the case of older people, this may include viewing policy in relation to ageing, health, mobility and social inclusivity. Whilst there is a suggestion in the guidelines for rural proofing to engage local stakeholders in decision-making, this is not a policy requirement (Defra, 2013c).

The broad approach to rural services policy (rural proofing) fails to scrutinise access to services for different population sub-groups, including older people and differential access within groups. Crucially, this policy stance does not consider combinations of traits that could affect the impact of service change. The criticism reflects that of Atterton (2008), who noted the blunt assessment of impact used in rural proofing. Evidence from this project has suggested that different levels of rurality may present different access challenges, that different services do not necessarily pose the same barriers, and that older people are a heterogeneous group. There is also a risk of a cumulative impact of disadvantage for some groups; for example, non-drivers reliant on public transport to access services that have been concentrated in towns could find it problematic if public transport was reduced. These factors imply that policy should be concerned with interactions between factors for different population groups.

One way to address this concern is to provide the overall stance at the national level, with detail and targeting for relevant groups occurring at the local level. This is broadly the approach of rural proofing, where national guiding principles are set (Defra, 2012). This policy stance, however, is no guarantee of effectiveness. For example, the case study document review highlighted that local policy goals omitted the same rural service issues as national policy, even in predominantly rural areas. Whilst not linked to other services, public transport is the only service explored through a more comprehensive lens in the review.

8.2.5 Higher costs associated with accessing services in rural areas

The costs associated with rural services are acknowledged in the academic, third sector and policy literature (see Dwyer and Hardill, 2011; Rural Services Network, 2011; Dobbs and Strain, 2008; Age Concern and Help the Aged, 2005). In these cases, the costs highlighted relate to those falling on service providers who may incur additional costs to deliver services across sparse areas with fewer customers. The evidence from the case study suggests broadening this discussion to include the increased costs of accessing services for rural residents.

Some participants in the case study, particularly those who had moved from urban areas, noted the greater expense of services. An example of this was fuel; fuel cost more in rural garages, and the journey was longer to bigger towns and cities with cheaper fuel. Journeys to services in general were longer and therefore used more fuel, making this a particular problem. Discussions of supermarket shopping highlighted this predicament further; one participant chose to shop online and pay for delivery, working out that this was cheaper than the fuel costs to and from the supermarket.

Policy needs to consider the added costs of accessing services for rural residents. The CRC data analysis noted the longer journeys rural residents need to undertake to get to their nearest basic services. The case study participants indicated that there was a preference for private transport (alongside ongoing reductions to public transport in the village and local area).

This approach, however, is inherently costly with vehicle purchase and running costs. The impact of the cost of service access is unlikely to fall evenly across the rural population and may interact with other dimensions of disadvantage.

8.2.6 Planning (or lack of) for the future

The case study findings highlighted areas where participants had planned or not planned for their future, something that has important policy implications for ageing and retirement. Retiring to the village was a choice for some of the participants and could represent the agency aspect of person-environment fit; these participants had actively selected their environment (Carp and Carp, 1984; Kahana, 1982). By choosing to retire to the village, often from urban areas, the older people in the case study are part of the established trend of 'counter-urbanisation' (Champion and Shepherd, 2006). Nationally, there is significant pre-retirement and retirement migration, with retirement acting as a key motivation for moving (Champion and Shepherd, 2006; RERC, 2005; Stockdale, 2006).

The person-environment fit theory suggests that individuals choose the environment that will best suit the individual's needs, in relation to their personal competencies, or that they already live in a suitable environment (Carp and Carp, 1984; Kahana, 1982). The narratives from the participants who retired to the village did not seem to fit this theory; however, discussions of retirement decisions were tangential in the interviews and focus groups, so may not offer sufficient data to assess fit. These participants spoke of wanting a countryside environment to enjoy and some chose the village with little prior knowledge or experience of it; practical concerns about a balance between location and property price were often raised. Those who retired to the village did seem happy with their choice and felt that they belonged in the village; in this sense, the move met their needs, but these are not the same considerations as hypothesised by the person-environment fit theory. These participants did not focus on long-term needs or view their chosen environment in relation to possible future decline in personal competencies.

A further group of participants had lived in the village or local area long-term and were remaining there in retirement. This group may see the village environment as suiting their needs, and therefore not feel the need to move (see Carp and Carp, 1984; Kahana, 1982). From the discussions with this group of older people, planning for the future prioritised keeping to their roots.

In a similar way to the newcomers, the long-term residents were not necessarily planning for their future needs. Relevant to both sub-groups of older people in the case study, Evandrou and colleagues' (2010) analysis of longitudinal data from the British Household Panel Survey from respondents aged 50 and over, demonstrated two peaks of older peoples' migration. They found that people were most likely to move in their 50s and 90s, suggesting that migration is most likely to occur at the earliest and latest periods in older age (Evandrou et al., 2010). The increased likelihood of moving in late older age could suggest that the person-environment fit conceptions of choosing (or remaining) in suitable environments (see Carp and Carp, 1984; Kahana, 1982), requires older people to readdress these issues with advancing age. The decisions made in early retirement may not fit with future changes in circumstances and the evidence from this case study hints that older people may not be planning for the appropriateness of their environment for late older age.

One area that highlights the potential lack of planning for possible future needs was the relative unimportance of the functional role of services in participants' rural retirement decisions. Only one participant mentioned taking local service provision and longer-term needs into account when moving home in retirement. As others did not highlight services as a factor in their decision-making, it is possible that participants did not consider services or that other factors overrode this. In this possible scenario, the rural lifestyle and community spirit that participants enjoyed about the village compensated for the limited service environment. It is not clear in this case where the tipping point is; how limited services can become before this affects older people's positive feelings towards village retirement. Evidence in the existing literature suggests that later migration is likely to be to a large, but still rural, settlement (see Champion and Shepherd; Stockdale and MacLeod, 2013; Stockdale, 2011). This could indicate

that larger, rural settlements present a balance of the rural life that is enjoyed and the services that are needed for these older people.

The approach of some of the participants to increase the longevity of the suitability of the village environment was to protect themselves against service change and retrenchment. They used various means to achieve this, but there are the inevitable questions of how long this could continue and whether there would come a point when the service environment became an overriding problem. This links with the general view from the case study findings, which suggest that the rural lifestyle participants had either chosen to move to or stay with, was under threat. The areas that the participants highlighted as making the village a good place in which to live and grow older, interlinked with their reasons for concern for the future.

This overlooking of the service environment in retirement decision-making presents a challenge for policy. Although participants were making thoughtful decisions based on the lifestyle they wanted in retirement, they were not seemingly making choices based on future needs and the service environment. Policy therefore cannot assume the priority of factors in retirement decisions or assume that decisions made at one point in time will continue to be relevant throughout older age. Further research could explore whether these findings apply in other situations, as the evidence here is from one case study only.

8.2.7 Ageing in place

Currently, broad policy approaches advocate older people 'ageing in place' in their own communities. For example, the umbrella government policy of 'providing housing support for older and vulnerable people' includes strategies for 'helping older and disabled people live at home for longer' (DCLG, 2014). This policy approach has support from Stones and Gullifer's (2014) research undertaken with participants aged 85 and over, living in rural communities in Australia. They found that remaining at home was linked to participants maintaining independence, having control and 'being themselves', which were

all perceived as important by the older people themselves (Stones and Gullifer, 2014).

Ageing in place policies overlap with the theory of place attachment (see chapter seven for a discussion of place attachment), where remaining in a community that one feels attached to confers social and psychological benefits to the resident (see Burholt, 2006; Smith, 2009). Burholt's (2006) conception of rural place attachment comprises overlapping themes of social, physical, psychological and temporal attachment. Place attachment theory implies a variety of experiences, which would need to be taken into account by policy to ensure the success of ageing in place as an approach. It is suggested that the strength of place attachment in each of the domains may differ between urban and rural areas; rural areas have a relative lack of services but may benefit from the physical environment, compared with urban areas (Burholt, 2012). Place attachment within rural areas is also variable, with hints that different types of rural communities prioritise different aspects of attachment (Burholt and Naylor, 2005). Place attachment theory highlights that not all aspects are positive; for some, ageing in place could be the 'lesser of two evils' rather than the best option. In Stones and Gullifer's (2014) study of the oldest old living in rural Australia, some participants were fearful of moving to a retirement or care home, therefore making ageing in place the more preferable option. This has implications for policy, as fears could be preventing some older people from moving rather than necessarily wanting to age in place.

The findings of this study present some implications for the ageing in place agenda in relation to retirement migration and the changing social and service environment. The case study comprised participants who had lived in the local area for all of their lives and others who had moved to the village in retirement. This presents an interesting question for ageing in place, do retirement migrants age in place in their new communities. Stockdale and MacLeod's (2013) research of pre-retirement migration to remote rural areas in Scotland, Northern Ireland and Wales, provides some evidence here. They found that only a small minority of retirement migrants in their case study sites planned to move again. Among those in Stockdale and MacLeod's (2013) study who had thought of

moving away, a main concern was being removed from their family connections; they were worried about what might happen in the future, if they were in poor health. There were hints, however, that the adult children of one pre-retirement migrant might choose to move closer to them, in their own retirement move (Stockdale and MacLeod, 2013). In my study, none of the newcomers to the case study village had plans to leave the area (although this was issue was not directly covered in the topic guides). The findings also suggest that community resources – neighbours - could be drawn upon for informal support, which could mitigate some of the impact of not being geographically close to family; however, there was no suggestion that neighbours could be relied upon for care. Overall, it appears that retirement migrants are likely to age in place in their new communities.

For both the long-term residents and the newcomers to the case site, the instability of the service and social environment of the village was an important area for consideration relating to ageing in place. The factors that made the village a good place in which to grow older were predominantly social, but the social environment in the village had the potential to be undermined by changes to the local services. The presence of everyday services in a community is one area of place attachment (Burholt, 2006). The case study participants had concerns about the future sustainability of their local services, the lack of which could make it more problematic to age in place. Priorities may shift over time, so that an enabling environment for carrying out everyday tasks becomes more valuable (Burholt and Naylor, 2005), suggesting that basic services are important to ageing in place. In addition, Burholt and colleagues (2014) found, through a survey of older rural residents in areas of South West England and Wales, that place attachment was enhanced in rural areas with access to local services, even if these services were limited.

The basic services in the case site performed both functional and social roles. They provided the community with access to everyday items and transportation as well as being a setting for informal interactions with other residents. Research into the social role of services in suburban Australia suggests that they provide a platform for Civic Socialising (Stewart et al., 2015). The theory

suggests that being recognised by local shopkeepers reinforced being seen as part of the community for older people, who in turn supported their local shops to help ensure their independence in the future (Stewart et al., 2015). Research by Doheny and Milbourne (2014) highlighted that having access to local services was a key factor in preventing social isolation amongst older, rural residents on low incomes. Whilst the findings of the case study also identified older people trying to sustain the village services, participants were also aware that local services were in decline.

It appears that place attachment is a delicate balance of physical, social, psychological and temporal domains (Burholt, 2006). It is unclear how important the social and service environment of the community is in the overall attachment of a person to the place, and it is likely to differ between people. Place attachment is not a static concept and may change for a person over time (Burholt, 2012). The findings of the case study, of the instability of the service and social environment of the village, may present a challenge to ageing in place policies. People could lose attachment to place as 'place' changes over time, especially if this change is insensitive to local needs, and could undermine the ageing in place agenda. One way to address this issue could be to encourage the consideration of ageing in place policies within the rural proofing policy; changes in rural areas could be rural proofed in relation to the continued ability for the area to sustain people ageing in place.

8.2.8 What is 'rural' and how stable a concept is it?

The findings from across the project strands highlighted tensions within the concept of rurality and how this is interpreted in policy and guidelines. In the government criteria for the Post Office's 2007-9 Network Change Programme, and more generally in rural policy, the definition of rural is dichotomous, with 10,000 residents used as the cut-off point. This is the crudest measure of rurality and the findings of this project support the use of a more nuanced understanding of 'rural'.

The data from the CRC hinted that sparsity could be an important way to differentiate rural areas, as settlements in sparse areas had a different pattern of change in one of the service examples. There was insufficient data across the project using the urban/rural classification system for output areas to draw any firm conclusions about the role of sparsity; however, it does provide potential for future exploration. This suggestion fits within the broader findings that different rural areas are not necessarily alike.

In both the CRC and Post Office analyses there were differences in the patterns and types of changes that occurred between the different categories of rural settlements. As an example, in the Post Office's 2007-9 Network Change Programme, the most rural (R75) areas were particularly vulnerable to change; the other two rural categories did not experience similar levels of closures or outreach services. It therefore seems inappropriate to assume that rural access to services is uniform across different types of rural areas; the type of settlement and area may be important for issues of access and trajectories of service change.

The discussions from the case study fieldwork highlighted a sociocultural approach to rurality, where 'rural' is socially constructed and linked to attitudes. For participants, 'rural' was a way of life, separate from geospatial definitions. The findings from this strand of the project hinted to rural life linked to attitudes and approaches that were distinct from the urban lifestyle. Currently policy does not identify the cultural aspects of rurality, which contribute to the rural way of life. Whilst this approach to rural classification is not easily measurable, exploration of this area could aid an understanding of how rural communities, and older people, may react and cope with service change and access issues.

The findings from the case study, demonstrating a sociocultural approach, also raise the question of how stable is the concept of rural. The overall view from the participants in the case study was of a community in flux. Those who had lived in the area all their lives acknowledged a complete change in the rural lifestyle from their childhood; these participants spoke of recent changes and concerns for future changes, both to the service and social environment of the

village. This was within a context of demographic change; participants thought the village had an ageing population and younger people were leaving for more affordable housing and career opportunities.

These findings highlight that, for this village, changes have occurred in the past, are ongoing in the present and predicted for the future. These changes have the potential to affect what constitutes a rural lifestyle, as demonstrated by the changes to the rural way of life from some participants' childhoods to older age. This would suggest that, at least from a sociocultural approach, rurality could be a fluid construct.

Using the different approaches to defining what rural means alongside each other, policymakers and research could better take into account the nuances of rurality. A combined sociospatial and sociocultural approach could be a more effective way to address rural service and access issues and may help to target communities that might be more likely to struggle in the wake of change. This approach could also extend to understandings of the 'environment' in person-environment fit; the environment is not just physical, but also cultural, linked to the lifestyle of the person and imbued with meaning (a sense of belonging). Using more factors in classifying rural areas could be one approach to gaining a greater understanding of patterns of changes and their effects, which are unclear using purely sociospatial classifications.

8.2.9 What is an acceptable level of access?

There is no clear definition for rural residents on the issue of what is a reasonable and acceptable level of access to services. The differing approaches within the Post Office 2007-9 Network Change Programme documentation and between this and the CRC data highlight this problem. The Post Office Network Change Programme used government defined minimum access criteria, which seemed to suggest a difference between urban and rural areas; the proportion of the urban population within one mile of the nearest post office compared to three miles for rural residents, at the national level. These distances were extended at individual postcode levels to the majority of the

population being within six miles of their nearest Post Office branch (Post Office FOI request, 2012). The implication from the documentation appears to be that these distances were reasonable, however it does not go into any detail about how or why these distances were set and, if they are deemed reasonable, to whom they are suitable and based on what criteria.

In contrast, the CRC uses set distances, which are the same for both rural and urban areas. This implies that acceptable distances to services are different according to the type of services and that acceptable rural distances are the same as those for urban areas. It appears that local, frequently used services have shorter distances than services which might be used less frequently; for example, distances to convenience stores and post offices are compared to shorter 'reasonable distances' than supermarkets and banks. The basis for this suggestion is inference alone, as there is no explanation provided about the motivations for CRC choosing these cut-offs. These differing approaches highlight the inconsistencies of assessing reasonable distances to services, especially as the government set both approaches.

Both the Post Office's supporting documentation and the CRC's cut-offs seem to equate accessibility to distance, in spite of efforts on the part of both to avoid this. The Post Office state that they are using distance as a measurement to meet the government criteria on accessibility, however in individual discussions of branch closures, issues such as public transport are taken into account in the decision making process (Post Office FOI request, 2012). The CRC are clear that distance is not a proxy for accessibility to services, but they offer no contextual information in the reporting of their data.

Neither the Post Office nor the CRC took into account the needs of different population sub-groups in their calculations of reasonable distances to services. The fieldwork from the qualitative strand of this project and the analysis of the ELSA data suggested that some older people with limited mobility could find it difficult to walk to services, even if the distances were relatively short. This could be a problem for rural areas as older people are overrepresented and it

seems that 'reasonable' distances to some services are longer; these factors may not be compatible in light of the findings of this project.

The outcome for policymakers is the need to decide upon acceptable distances to services. Accent Scotland and Mauthner's (2006) research into service quality and accessibility in rural Scotland, highlighted that rural residents were more concerned about access to, rather than quality of, services; rural residents were generally satisfied with the quality of services once they were accessed. To address this, acceptable distances to services should take into account the type of service (how frequently it is used), the rurality of the area (including physiognomy) and the likely demographics of the area. Using this approach may go some way to producing distances that are acceptable to the population, and sub-groups, who are the customers of these services. Across government departments, and within its criteria, these reasonable distances should be a benchmark. Although this approach would consider some contextual factors, caution is still required when using measurements of distance as a proxy for accessibility.

8.2.10 Using administrative data

The original purpose of both the CRC and Post Office data was not for research; the Post Office FOI response was records of decisions and the CRC collated data held by service providers. There appears to be a trend to utilise administrative data in answering social research questions; for example, the Economic and Social Research Council, the Medical Research Council and Wellcome Trust have joined together to form an Administrative Data Taskforce to facilitate the availability and use of administrative data (ESRC, 2015). The experiences from this project highlight some implications for researchers of doing so.

An advantage of using administrative data in this project was access to population level data, rather than a sample (although this is not necessarily the case with all administrative datasets). This is unusual within quantitative social science generally, making it difficult to find relevant literature discussing this

type of data. There were no separate discussions of the conventions for reporting results of population data; the approach taken in this project is based on not reporting statistics that might suggest the data were from a sample. In addition, the range of quantitative analytical techniques was limited in its appropriateness to these datasets, due to the relatively small number of variables included. These are areas where the social policy academic community would benefit from researchers sharing their experiences and approaches to working with administrative data.

There were two reasons for the relatively small number of variables in the datasets; few were originally collected and there were limited opportunities for extensive data linkage. In both datasets, data linkage was required to enhance the relevance of the data for the research project's focus. Data linkage was not a straightforward process and was dependent on the availability of complementary datasets containing the same unique identifier. Practical considerations hampered efforts to link further data; relevant datasets were no longer available, geographical boundaries had changed over time and datasets contained only one geographical identifier. This has implications for research and dataset producers. In the case of this project, other data of interest were compiled by government departments but contained only one type of geographic identifier; for data linkage it would be helpful to supply the data of interest alongside multiple identifiers to maximise the chances of data linkage.

Finally, current enthusiasm for utilising administrative data may underestimate the amount of data preparation required. This is highlighted by the Post Office FOI response, where producing the dataset took an unexpectedly long time; the challenges of missing data, incorrectly recorded data and subsequent changes to geographic boundaries all needed to be overcome in a robust manner.

Overall, the research community and government departments could enhance the usefulness, knowledge and efficiency of administrative data in social policy research. Researchers should be willing to share experiences of using administrative data, their methods and ways of overcoming barriers in academic articles and working papers. Further, demographic and contextual information

produced by government departments or archived by researchers should contain multiple possible identifiers (if possible). This would open opportunities for data linkage, which would increase the number of variables in the new datasets. This, in turn, could expand the range of statistical techniques that would be relevant to use.

8.2.11 Usefulness of person-environment fit model for exploring older people's access to services in rural areas

The theory of person-environment fit has been used as an overarching framework throughout this research. By using the approach to answer multiple research questions, addressed using a mix of methods and a range of data sources, limitations to its usefulness have been identified. The person-environment model can encourage a narrow view of what constitutes an environment; however, the analyses of this research suggest that the environment of older people is multi-faceted. The tendency to conceive of the environment as a physical space is overly restrictive, possibly stemming from the focus of quantitative assessments of person environment interactions (Smith, 2009). The case study highlighted that the rural environment is both physical and social, mirroring a sociocultural approach (see Keating and Phillips, 2008). Peace and colleagues (2007) characterise the environment in a more holistic way, which is helpful to this project. They conceptualise the environment as consisting of physical, social and psychological dimensions that operate at multiple levels, from the home through to neighbourhood and onto the national and global (Peace et al., 2007). Their framework acknowledges that the physical environment is important, but places this within the context of how people interact with it and the impact on meaning and feelings towards place (Peace et al., 2007).

This view of environment allows for some crossover between person and environment elements, which was important in this study in relation to neighbours. In the case study, neighbours were identified as a source of informal support to, and from, older people; however, it was problematic to categorise neighbours either as being an element of the environment or as linked to the person. Whereas friends would be more easily characterised as

'personal', neighbours suggests that the support offered is bounded by where an older person lived; if the older person moved then the neighbour might not continue to offer support, whereas a friend might. Peace and colleagues' (2007) overview of what constitutes the environment allows for some overlap between person and environment, in the social domain, addressing a limitation in the traditional conceptions of the environment.

This study further identified the person environment fit theory as constraining in terms of exploring complexities. The person-environment fit model suggests that the scales of the axis are static fixed or a snapshot of one time point. However, there were hints from the retirees to the village that decisions were made that reflected a particular point in time, which might subsequently not suit future needs; it could be that the range of competencies or press are different throughout the ageing process. Smith (2009) has developed the person-environment theory to incorporate more complexity in interactions. She highlights that a linear theory that equates too much environmental press for person competencies with a negative outcome is too simplistic. Instead, she encourages research to take into account personal history, beliefs and outlooks into the person-environment relationship (Smith, 2009).

Despite my research finding limitations in the person-environment fit model, it did provide a useful initial framework for the study. The research questions spanned multiple disciplines, which lacked common terminology. The person-environment fit model thus provided an overall organisational tool to order the literature and narrow the field of interest. In this way, the simplicity of the model was useful as the foundations for the project.

8.3 Summary

The meta-inferences drawn from across the multiple data sources addressing different research questions demonstrate the value of mixed methods research. The meta-inferences highlighted where different approaches strengthened the overall findings of the research through examining different facets of older people's access to services.

The implications of the findings and meta-inferences for policy suggest that rural services are an important area for consideration by policymakers. Some of the issues raised throughout this research have the potential to present challenges to the effectiveness of policies in their current form. The study also highlighted areas for future development of theory and methodology, which could strengthen future research in this field.

9 Conclusion

This research centred on the aim of exploring the issue of service change, via older people's perceptions of access and possible impacts. Given the accelerated growth and ageing of rural areas, there was a particular focus on a rural dimension. The study utilised a mixed methods approach. The predominantly exploratory nature of the research aim and objectives allowed the research to benefit from a range of research approaches, data sources and analytical techniques. The findings from this study may have implications for policy in England, through highlighting the need for a more holistic approach to supporting ageing in rural areas, including considering the service needs of an ageing population.

The review of the relevant literature highlighted some gaps in the current evidence base. The literature review spanned multiple disciplines. It was advantageous to the project to be able to draw on existing literature that approached the field of interest from different perspectives; however, there was a lack of coherence in the reviewed research in relation to service change and the impact on older people in rural areas. The central issue of this study represented a crossover of interests from multiple disciplines, but each discipline seemed to focus on one element primarily (for example, transport or inequalities in internet usage). This left a gap in the existing literature for a study to take an interdisciplinary approach to examine the issues around service provision in rural areas and the impact on older people.

Further, the review of the literature demonstrated that there was little research that examined changes to multiple services. My study aimed to use a range of data sources that allowed for an investigation of change to several 'everyday' services to address this gap in knowledge. In addition, there was only limited research in the area that incorporated a temporal element, whether in relation to the person (in terms of ageing) or changes to the environment over time. My research used longitudinal or repeated measures data where possible, and encouraged participant reflections, to include evidence on change over time; this approach set the findings in a context of change, that neither people nor

environments were static. Finally, the literature review highlighted the relatively little evidence on service change in rural England; this is important, as definitions and types of rurality differ internationally (see Manthorpe et al., 2008 for an explanation of what rural means in England). That rural England may have different connotations from rurality in other countries makes it important to bolster the evidence relating to rural England, which my study has done.

The multidisciplinary review of the literature highlighted the existing evidence base in relation to older people, service change and rurality and exposed areas where there was little research. My study was thus positioned to address some of the gaps in the literature and provide complementary evidence to support continued debate in this field.

The first empirical strand provided context and a case example of service change, addressing two of the gaps in the existing literature, by examining changes in multiple everyday services and including a temporal element. The first section of chapter four used data from the Commission for Rural Communities, over several time points, to examine changes in the distances to different services across the urban/rural continuum over time. The analysis showed that service change had been widespread since 2000. For supermarkets, the decreases in average distances suggested that new stores had opened, however for banks and building societies and Post Offices the increase in distances was indicative of branch closures. The second section of the chapter utilised one case example of service change, the Post Office. Examining the outcomes of two compulsory programmes of change, the Post Office had initiated closures in urban and rural constituencies, with a predominance of closures in the most urban and most rural areas. Outreach services, an alternative form of Post Office service delivery, were almost without exception implemented in rural areas and the majority were in the most rural constituencies.

The main research objective for this chapter was to assess whether there were differences in service changes between rural and urban areas. In relation to this, the analysis of average distances suggests that increases in journey

lengths were proportionate to the original distance in 2000; rural areas had consistently longer distances to travel to access services, but rural and urban areas both had similar, proportionate increases in average distances to services over time. This is evidence that service change was similar across the urban/rural spectrum, but the trend for longer distances to services for rural areas remained. The analysis of the Post Office case example of change suggested a different picture; rural areas were more vulnerable to change. The most rural areas had undergone the second highest number of closures (the first being the most urban areas), but unlike urban areas, rural areas had also undergone service change, which is suggestive of rural and urban service delivery being considered differently by decision makers. The majority of the outreaches were in the most rural areas, the same classification that also had a high level of closures. It would therefore seem that very rural areas were more vulnerable to service change because there were high numbers of branch closures and service delivery changes, whereas very urban areas were vulnerable only to closures. The findings from the two data sources together suggest that assessing the role of rurality in service change is more complex than simply closures and increased distances to services. Rural areas may be more likely to have alternative forms of service delivery, which constitutes a change for rural residents that is not reflected in distances to services (because a closure has not occurred). It would seem that rural areas were vulnerable to service change compared to urban areas, but that this does not translate to an unfair disadvantage in increased distances to service outlets (including alternative forms of service delivery).

The second empirical strand utilised data from the English Longitudinal Study of Ageing for both cohort and longitudinal analysis of four waves of the study, addressing some of the gaps identified in the review of the relevant literature. The analysis of ELSA data in chapter five enabled the examination of older people's perceptions of their own access to multiple everyday services (banks and building societies, local shops, Post Offices, shopping centres and supermarkets), allowing for differences or similarities of access difficulties between different services to be investigated. The longitudinal analysis of the data incorporated time (ageing) into the findings, which was compared to the

cohort analysis; the possibility of comparisons between the two sets of findings by analysis technique, enabled the findings to be strengthened through using different perspectives and including the largest sample possible.

The cohort analysis of waves one, two, four and five (logistic regression) found that the key predictors of finding access to services difficult were linked to mobility; this relates to both personal mobility and transport. Having difficulty walking a quarter of a mile unaided was the most consistent predictor of finding access to services difficult. Whilst the person's walking ability is a barrier to access, and it may not be possible to improve the person's walking, efforts to improve access for these people could still be made. The review of the literature on walkability suggested that changes to the environment to make it more enabling for older people could be beneficial for those who find walking problematic. For example, ensuring that the pavements are in a good condition (see Wennberg et al., 2010) and there are benches (Wennberg et al., 2009; Ståhl et al., 2008) could make walking journeys easier. Benches were found to be particularly important for those who had to make regular stops on walking journeys (Ståhl et al., 2008), which may apply to the ELSA sample members who find it difficult to walk a quarter of a mile unaided. In this vein, walkability is not trying to increase the physical abilities of the person; instead, it is aiming to reduce environmental barriers and increase environmental facilitators to make walking more manageable.

Also linked to mobility were issues around transport options. Across the waves and different services, not having the use of private transport and never using public transport were associated with finding access to services difficult. Both of these predictors, speculatively, could be linked with barriers to public transport; public transport barriers could be exacerbating the effects of not having private transport or be the reasons behind non-use. There is existing evidence, outlined in the literature review, to suggest that some older people experience barriers to using public transport, associated with both person-centred and environmental limitations (see Help the Aged, 2007a; Gray et al., 2001). As with walkability, environmental barriers could be reduced to help improve older people's access to services. For example, barriers such as bus frequency and antisocial

behaviour could be addressed to enable more older people to use public transport (see Help the Aged, 2007a; Gray et al., 2001).

The longitudinal analysis of the ELSA data, using event history analysis, found that the increased difficulty of accessing services as people aged were more pronounced for some services than others; older people were most likely to experience a reduced level of access over time in relation to supermarkets and shopping centres. It is possible that access to these services, which can be in out-of-town locations, presents the most challenges to people as they age compared with the other services examined that tend to be more local or in central locations. The event history analysis found that the key predictors of finding services increasingly difficult to access over time were linked to the attitudes of the older person. It appeared that negative attitudes about age were associated with reduced levels of access as the person aged. Societal change, to value older people, could help to reduce barriers about what an ageing person can or cannot do. In this context, attitudes are an important element of the environment that has the potential to be constraining or enabling.

Both the cohort and longitudinal analysis of the ELSA data contribute to the overall research objective for this strand of research, to assess whether there is a rural or urban dimension to how older people perceive their access to services. Both sets of findings show little evidence that rurality had a role in perceptions of access; the rural/urban classification of where the person lived was rarely a predictor of older people finding access difficult. This finding was somewhat unexpected, especially in light of the evidence from the other strands of research; rural residents have consistently longer journeys than urban residents do, but this does not translate to a difference in self-perceived access. It could be that this contradiction is a result of differing expectations between urban and rural residents on what can be classified as easy journeys. Farmer and colleagues (2005) have already noted that rural residents can be unexpectedly satisfied with services (see chapter two). Satisfaction, or perceptions of ease, in access may not necessarily correspond to objective measures of access. This could mean that rural older people accept differences in access or possibly view them as inevitable. This approach, whilst speculative,

shares some similarities with the findings of the qualitative strand of research in this study.

The third empirical strand of research used a case study to explore the impact of rural service change on older people living in the community (see chapters six and seven). The case study comprised a document review of local policies, plans and newspaper coverage relating to change in the case site and surrounding area, as well as interviews and focus groups with older people and organisational representatives from the case site. The findings of the case study demonstrated that some older people had developed strategies for managing changes to the service environment. One such strategy, and an issue that was predominant in discussions, was the importance of transport options. Whilst most participants referred to private transport, public transport was essential for the independence of others. Access to transport, public or private, allowed residents to reach services that had been centralised or that the village had always lacked; in this sense, transport had the potential to mitigate the impact of loss, but only if it was available, sufficient and affordable. The importance of transport is reflective of the cohort ELSA findings that not using public transport and not having the use of private transport were associated with poorer service access. The role of transport found through the case study is supportive of existing literature that links transport (and particularly car use) to freedom and independence for older people (see Help the Aged, 2008; Zeitler and Buys, 2015).

The case study participants repeatedly highlighted the importance of being (and feeling) part of their community. My findings on the type of neighbourly support offered and received can contribute to the relatively small amount of evidence on the role of neighbours in rural older people's support networks. The findings from the case study are broadly supportive of LaPierre and Keating's recent (2013) quantitative research results where neighbourly support was predominantly practical and based on being proximate to each other. LaPierre and Keating's (2013) study used data from self-perceived carers from the 1996 General Social Survey of Canada. This study adds more recent, complementary evidence on the role of neighbours from a qualitative perspective, crucially of

neighbours who did not identify themselves as a carer. The case study findings also contribute a view of neighbours as supportive community members, but not as providers of personal care; the case study participants saw their offer or receipt of support as being part of the reciprocity of village life.

One of the major findings of the case study was the recognition of the social role of village services. There is a lack of existing literature giving evidence of the social functions of services, instead referring to it as a 'perceived wisdom'. The most notable study of the social benefits of local services is that of Stewart and colleagues (2015). Their research of local shops in an Australian suburb concluded that being recognised by the local shopkeepers helped older people to feel part of their community (Stewart et al., 2015). The evidence from the case study builds on this recent Australian evidence by showing that informal meetings with other residents at local services also reinforced feeling part of the community. Whilst Stewart and colleagues (2015) focused on the role of shopkeepers as a source of interaction, my study highlights how local services can be platforms for chance meetings between customers. Together, these studies help to construct a greater evidence base on the social roles of services and how these social benefits are generated.

The case study participants perceived the village as a good place in which to grow older; the service environment was one element of this. Whilst this was not the original intention of the project, it appeared that the older people involved with the research were exhibiting place attachment. Partly because the study was not aimed at exploring place attachment, the relevant findings could contribute to this area of literature, providing a complementary perspective, with a slightly different focus. The areas that comprised what made the village a good place in which to grow older had significant overlap with existing domains of place attachment, such as social attachment, social integration, social support and historical attachment (see Burholt, 2006; Smith, 2009). The findings from the case study relating to neighbourly relationships and the social role of services could expand the current conceptions of place attachment. Smith's (2009) attachment domain of public spaces highlights the social potential of public spaces, but focuses on parks; my case study demonstrates that local

services can also provide opportunities for informal social interactions that can help to reinforce a sense of belonging. Further, Burholt's (2006) attachment domain of social support focuses on care and support offered through kin; my findings suggest the role of neighbours in offering support, with older people as both givers and receivers of that support.

Whilst some critics of rural proofing see it as 'special pleading' (see Atterton, 2008 for a critique of this view), this is not the approach adopted in this study (that the case study findings support). The case study demonstrated that rural areas might need some protection in order to remain sustainable and suitable places for ageing, but not as a favour to a passive population (or special pleading). Older people showed resilience through adapting to long-term changes in their village. There was evidence of a supportive community and testimonies that the village offered a good place to grow older. The case study participants valued the future sustainability of their community (and the service environment as part of this), but were concerned about the effects of loss and the potential of an ongoing, downward spiral.

The case study aimed to address the research objective to explore what the impact is (if any) of service change on older people living in rural areas. The effects of service change were predominantly indirect, not related to the functional role of the services. Some of these indirect impacts can be classified as social; they affected the social structures of the village. Participants noted that the long-term loss of services had affected local employment and the mix of people living in the village (younger people tended to move away for jobs, education and affordable housing). The loss of services, or the change of provision type, had resulted in a loss of informal meeting places; this had the potential to reduce the friendliness and community feel of the village, something that was important in making the village a good place to in which to grow older. There was a sense from some of the older people who took part that the village was at risk of completely losing the liveliness and busyness that it had once had, when the village sustained a range of local services and businesses. The other main, indirect impact was on the sustainability of the remaining local

services. The local services appeared to be interrelated, with the stable future of one related to the success of others.

The main types of impacts that older people mentioned, and their focus on village services (as opposed to those in the wider local area) could be indicative of a hierarchy of services. The hint is that changes and loss to village services have the greatest impact on older people. As many of the concerns related to social (personal and community) impacts and the effect of change on remaining village services, it would appear that the greatest concerns related to the future of the village. It is worth noting that one participant did focus on the prospects and future of services in the nearest town, rather than the village. Whilst this is a speculative point, and not universally agreed upon by the case study participants, it may still be an area for consideration in policy. It suggests that people value sustainable communities, and see local services as one contributory factor in achieving this. Village services, whilst providing convenient access to goods, were also highly valued for their non-functional roles. This is in direct contrast to the trend of centralisation of services away from villages; it is possible that this trend is most damaging to older people living in rural communities.

The findings from the three empirical strands of the study were then drawn together to form meta-inferences. The aim of using a mixed methods approach for the research was not for confirmation or validation of findings across the strands, but for the opportunity to build meta-inferences from the findings of the complementary research objectives. The meta-inferences were gleaned through re-examining the findings and discussions of each strand, in light of the evidence of the other strands. From this approach, the inferences from each strand could be re-interpreted to address the overall research aim of assessing the extent of the role of rurality in service change, older people's access to services and impact.

Whilst each strand of research presents different conclusions on the extent of the role of rurality, it is also possible to take an overall view that draws on the strengths from each set of findings. In terms of older people's self-perceived

access to services, the ELSA data do not suggest that rurality is a significant factor in finding it difficult getting to services. Findings on the distances to services by urban/rural classification suggests that rural areas have not been unfairly disadvantaged by changes since 2000, although rural residents have longer distances to travel to services than urban residents. However, the case example of the Post Office showed that rural areas, particularly the most rural areas, were vulnerable to both closures and changes to service provision, suggesting that rural and urban areas were being treated differently. The case study highlighted the social and sustainability impacts on older people of local service change, underlining that this rural area was affected by service loss and alternative forms of provision; however, this does not necessarily mean that rural areas are unfairly disadvantaged as there is no urban comparator. Together, the findings suggest that the role of rurality is not straightforward; the impact is subjective and affects feelings about a community rather than being linked to objective measures of change or physical access. This conclusion could only be reached through utilising a mixed methods approach to exploring impact.

9.1 Key, overall findings and implications

From the separate strands of research and the overall meta-inferences, there are some key conclusions. It is clear that service change has an impact on communities (and older people) as well as service loss. This is particularly interesting in relation to rural areas as there is evidence to suggest that rural areas, particularly the most rural areas, are vulnerable to changes in service provision; service change in urban areas, in the case of Post Office outreaches, was rare. The impact of service change may be more challenging to assess, requiring qualitative research with customers and communities. The few existing studies (see Higgs and Langford, 2013; Langford and Higgs, 2010) that have aimed to examine the role of rurality in the compulsory Post Office programmes of change have neglected the implications of alternative forms of service provision. Both studies (Langford and Higgs, 2010; Higgs and Langford, 2013) use only quantitative measures of impact, based on distances to refute claims that rural areas, or areas with higher proportions of older people, were unfairly

disadvantaged by the Post Office Network Change Programme, the studies also viewed closures and changes similarly. This study, through using a mixed methods approach was able to highlight impact that stemmed from service change, which would suggest that rural areas were disadvantaged.

This conclusion, that service change can have an impact on older people living in the community, has implications for policy. Policies need to consider the impact of service change on customers (including variation amongst and within different population groups), as well as closures of services. This is likely to require an understanding of rural issues, as rural areas may be more likely to receive alternative forms of service provision due to the service delivery challenges associated with rural areas (see Dwyer and Hardill, 2011; Rural Services Network, 2011; Age Concern and Help the Aged, 2005; Dobbs and Strain, 2008 for an outline of these difficulties). This could be achieved as part of an enhanced rural proofing policy, through local consultation, to try to mitigate the impact of change. This study, through the case study evidence, acknowledges that services may be under-used and therefore at risk of change, possibly through alternative forms of service delivery. The suggestion is not to halt change, but to develop solutions with communities to reduce any effects and ensure awareness of potential impacts amongst policymakers.

This research has highlighted a range of unintended, indirect and long-term consequences of service loss and change in rural areas. These impacts included the loss of local employment; affecting the mix of people in the village and making the village seem quieter as less people were in public during the daytime. Service loss and change affected informal meeting places, contributing to concerns about weakening community cohesion and reductions in the bus services led to concerns about loss of freedom and independence for some older people. The case study also highlighted the interrelatedness of rural businesses; changes to one service could affect the fortunes of others. Bosworth's (2012) study presents a similar finding, but from the perspective of a village business rather than its customers; village businesses cooperated with and supported each other, understanding their shared challenges. The two

studies together could suggest that connections between services are more widespread amongst rural services than just the two case studies explored.

Policy, possibly integrated into rural proofing, should aim to protect communities from loss or change that could have significant effects on the remaining service environment. Policymakers should be encouraged to review plans for change or closure in the context of other ongoing or recent changes in an area, alongside considering the availability of alternative services and the future sustainability of any remaining services. The sustainability of the rural service environment is an important aspect of supporting and encouraging communities that are good places in which to grow older; it affects both the functional and social space of a community. In the policy context of ageing in place being preferred, ensuring a sustainable community that can support ageing is crucial. At times of proposed change, the effect on communities and the older people living within them needs to be thoroughly considered; changes to, or a lack of, service environments could undermine existing policy approaches for ageing in place. Ageing in place policies should also view the environment of older people more holistically, to cover facets relating to accessing basic services.

Finally, this study has highlighted the high level of diversity amongst groups, concepts and challenges in relation to service change and older people in rural areas. The research has noted the heterogeneity amongst older people as a population sub-group; for example, backgrounds, health and retirement choices. In the case study, this diversity amongst older people was most evident in the discussions of managing or coping with change; actively managing change required greater access to resources, predominantly private transport (and the wealth to enable running a car) and being able to afford to bulk buy items to ultimately save money, as examples. Further, the cohort analysis of ELSA suggested that having poor mobility and no access to public or private transport were the main predictors of having difficulty accessing services. This again suggests that personal resources are required to ensure good access to services in older age, such as good mobility (which may be linked to good health) and wealth to have a car. The research also highlighted that there is diversity amongst barriers to different services. These may be related to the

person or their environment; these could be distance, poor mobility, lack of public and private transport or attitude. Crucially, whilst there were some commonalities in the factors that were associated with older people finding it difficult getting to services, there was also variation between barriers depending on the type of service. Methodologically, this study also notes the diversity amongst areas considered as rural. As a general trend, the more rural the area, the worse off they appeared to be in access to services. Distances were generally longer to services for areas that were more rural and it was the most rural areas (rather than rural areas overall) that were the most vulnerable to change as a result of the Post Office Network Change Programme.

Together, these dimensions of diversity have the potential to combine, accumulating disadvantage for some older people; for example, being a resident of a very rural area, having a lack of transport options, having limited mobility and coping with the loss of local services. Appropriate policies have the potential to avoid some of the negative outcomes that cumulative disadvantage could incur. As some of these dimensions of disadvantage are structural, environmental and changeable, it is within the realm of policy to address. Policy has an important role to play in ensuring that communities are enabling for ageing populations, to meet with the policy direction of ageing in place (DCLG, 2014). This could include developing a policy approach to lifetime (or New Urbanist) neighbourhoods; this could help to foster communities that provide structural and cultural support for older people to remain in their area and be valued (see DWP, 2009; Harding, 2007; Lui et al., 2009; Bevan and Croucher, 2011). Any policy direction to supporting lifetime neighbourhoods may need to be accompanied by a greater level of consideration for the model in rural areas, as the focus of research thus far has been predominantly on urban areas (see Keating et al., 2013 for an exception to this).

9.2 Areas for future research

The findings from this study have highlighted issues and questions where further research would be beneficial. This research's contribution to the little existing empirical knowledge on the social role of services in rural areas has

raised some further research questions. The perceived wisdom around the social implications of services for older people and communities, the limited existing literature (see Stewart et al., 2015; Bosworth, 2012) and this study have a predominantly rural focus; it would be interesting to explore whether urban services also have a social role in their communities and with older people. This could have implications for future policy in this area: whether an extension of rural proofing is required to consider services social roles or whether this issue needs a nation-wide approach that will encompass both rural and urban communities.

Further, following from the findings related to the social role of services, it was beyond the scope of this study to examine the implications of loss or change in services' social functions specifically; older people highlighted their fears and concerns related to this but outcomes were not assessed. It would be worthwhile to explore whether service loss or change had an impact on older people's wellbeing or was associated with increases in loneliness or social isolation. These issues fell outside of the original aims and scope of the study, but became increasingly relevant in light of the combined findings. There were hints in the findings that loss of informal meeting places could affect an older person's interactions with others, but it is unclear how and if people managed this change. As with service change, the older people in the study demonstrated a range of approaches to dealing with change, which could have also extended to changes in their social life (if informal meetings at services contributed to this), but it is not clear.

In addition to the social role of services, participants in the case study highlighted a range of impacts that resulted from service loss and change. In the case site there had only been one type of alternative service provision (which applied to several services), namely mobile services. Some of the concerns that were raised in relation to alternative service delivery models were specific to mobile forms, such as having to queue outside. Existing research by Consumer Focus (2009) suggests that there are different implications with different forms of alternative service provision; this research focused on the Post Office and its functional role. It would be interesting to extend this idea to

explore other services and a greater range of potential impacts. For example, might a community shop or services based in a village hall offer more social opportunities?

The study overall hints to the need for greater exploration of the scope for developing age-friendly or lifetime neighbourhoods in rural areas; this would be particularly relevant in very rural areas as this research suggests that it is these areas, rather than rural areas more generally, that are vulnerable to service change. The existing research of lifetime neighbourhoods has a predominantly urban focus, but a Canadian study has outlined some key areas for a rural focus (Keating et al., 2013). This research could be extended to the English, or UK, context to develop a policy for providing communities in urban and rural areas that are enabling environments for ageing.

10 Appendices

Appendix 10.1 Post Office dataset preparation

Table 10.1 The number of Post Office branch closures across the United Kingdom as part of the Urban Closure Programme

<i>Country</i>	<i>Number of Post Office Closures</i>
England	2,113
Scotland	140
Wales	124
Northern Ireland	28
United Kingdom	2,405

Table 10.2 The number of invalid Post Office postcodes by decision area

<i>Decision Area</i>	<i>Number of Invalid Postcodes</i>
Bristol and Somerset	1
Cambridgeshire, Hertfordshire, Bedfordshire and South Lincolnshire	1
Cornwall	1
Cumbria	1
Dorset	1

Greater Manchester with High Peak	2
Herefordshire, Worcestershire and the West Midlands	1
Merseyside, Wirral and Cheshire with Wigan, Leigh and Makerfield	2
South Yorkshire with Huddersfield, Colne Valley and North Derbyshire	4
West Berkshire and Wiltshire	2
West Yorkshire	1
Total	17

Appendix 10.2 Selection of ELSA variables for inclusion in analysis

Table 10.3 The predictor variables chosen for possible inclusion in model development

Predictor variable	Response options (not including 'missing' options)	Comments
Gender	Male	
	Female	
Age	Continuous, but collapsed at ages 90	Was included in model development as a continuous and categorical

	and over	options
Marital status	Single, never married	
	Married, first and only	
	Remarried, second or later	
	Legally separated	
	Divorced	
	Widowed	
Whether the participant has any long-standing illness, disability or infirmity	Yes	These variables were combined to create a variable which indicated whether the participant had a long-standing and limiting illness, disability or infirmity
	No	
Whether the above long-standing illness, disability or infirmity limits the activities of the participant	Yes	
	No	
How much difficulty the participant has walking a quarter or a mile on their own and without any special equipment	No difficulty	The response options for this variable were regrouped to indicate little difficulty or much difficulty
	Some difficulty	
	Much difficulty	
	Unable to do so	

Whether the participant looked after anyone in the past week	Yes	
	No	
Whether the participant has the use of a car or van when needed (either as the passenger or driver)	Yes	
	No	
How often the participant uses public transport	A lot	The response options for this variable were regrouped to indicate whether the participant ever used public transport
	Quite Often	
	Sometimes	
	Rarely	
	Never	
The participant's highest educational qualification	NVQ4/NVQ5/Degree or equivalent	
	Higher education below degree	
	NVQ3/GCE A Level equivalent	
	NVQ2/GCE O Level equivalent	
	NVQ1/CSE other grade	

	equivalent	
	Foreign/other	
	No qualification	
How often the participant feels that their age prevents them from doing what they would like to	Often	The response options for these variable were regrouped to indicate whether the participant ever felt this way
	Sometimes	
	Not often	
	Never	
How often the participant feels that their health prevents them from doing what they would like to	Often	
	Sometimes	
	Not often	
	Never	
How often the participant feels that a shortage of money prevents them from doing what they would like to	Often	
	Sometimes	
	Not often	
	Never	
Whether the participant uses the Internet or email	Mentioned	This question was in the self-completion questionnaire
	Not mentioned	

Household equivalised total income	Continuous	This variable is from the financial derived dataset. The log of this value was included in model development
Output area urban/rural indicator	Urban >=10K – sparse	This variable was regrouped in different forms in model development
	Town & Fringe – sparse	
	Village – sparse	
	Hamlet & Isolated Dwelling – sparse	
	Urban >=10K - less sparse	
	Town & Fringe - less sparse	
	Village - less sparse	
	Hamlet & Isolated Dwelling	

Two variables were not chosen to be included in the analysis due to low response rates at wave 1. These were ethnicity (with a response rate of 44 per cent at wave 1) and self-reported health status (with a 49 per cent response rate). A further variable, caring status, was not included due to low response or question applicability, at subsequent waves (the questions seems to have only been asked to around 10 per cent of potential participants).

Appendix 10.3 Indication of ELSA preliminary investigations of the outcome variable and interactions with predictor variables

Table 10.4 Self-perceived access to a range of everyday services at wave 1 by ELSA sample members aged 65 or over

Rating of self-perceived access to	Bank or cash point	Local shops	Post Office	Shopping centre	Supermarket
Very easy	2,508 (54.57%)	2,968 (63.06%)	3,120 (65.50%)	2,433 (52.21%)	2,626 (55.41%)
Quite easy	1,601 (34.83%)	1,341 (28.49%)	1,299 (27.27%)	1,688 (36.22%)	1,609 (33.95%)
Quite difficult	288 (6.27%)	238 (5.06%)	193 (4.05%)	318 (6.82%)	280 (5.91%)
Very difficult	199 (4.33%)	160 (3.40%)	151 (3.17%)	221 (4.74%)	224 (4.73%)
Total	4,596 (100%)	4,707 (100%)	4,763 (100%)	4,660 (100%)	4,739 (100%)

The proportions of each access rating are broadly similar across different service types. There appears to be a distinction between finding access very or quite easy compared to quite or very difficult, which is consistent across service types; the groups are collapsed according to this distinction

Cross-tabulations and chi-square tests were carried out between the outcome variable and predictor variables that featured prominently in the literature. The following tables give an indication of what was found, it is not exhaustive of the preliminary investigations

Table 10.5 Self-perception of access to a Post Office by urban/rural indicator

How participants judged their access to Post Offices	Urban/rural classification		Total
	Urban	Rural	
Easy	3,315 (92.42%)	1,102 (93.87%)	4,417 (92.77%)
Difficult	272 (7.58%)	72 (6.13%)	344 (7.23%)
Total	3,587 (100%)	1,174 (100%)	4,761 (100%)

$p=0.096$

Table 10.6 Self-perception of access to a Post Office by level of walking difficulty

How participants judged their access to Post Offices	How participants judged their level of difficulty walking ¼ mile unaided		Total
	No or some difficulty	Much difficulty or unable	
Easy	3,691 (98.24%)	726 (72.31%)	4,417 (92.77%)
Difficult	66 (1.76%)	278 (27.69%)	344 (7.23%)
Total	3,757 (100%)	1,004 (100%)	4,761 (100%)

$p < 0.001$

Table 10.7 Self-perception of access to a Post Office by existence of long-standing and limiting illness or disability

How participants judged their access to Post Offices	Whether participant has a long-standing and limiting illness or disability		Total
	Yes	No	
Easy	1,583 (84.92%)	2,836 (97.83%)	4,419 (92.78%)
Difficult	281 (15.08%)	63 (2.17%)	344 (7.22%)
Total	1,864 (100%)	2,899 (100%)	4,763 (100%)

$p < 0.001$

Table 10.8 Self-perception of access to a Post Office by participants' use of a car or van

How participants judged their access to Post Offices	Whether participants have the use of a car or van when needed		Total
	Yes	No	
Easy	3,374 (94.91%)	1,043 (86.48%)	4,417 (92.77%)
Difficult	181 (5.09%)	163 (13.52%)	344 (7.23%)
Total	3,555 (100%)	1,206 (100%)	4,761 (100%)

$p < 0.001$

Table 10.9 Self-perception of access to a Post Office by participants' use of public transport

How	Whether participants ever used	Total
-----	--------------------------------	-------

participants judged their access to Post Offices	public transport		
	Yes	No	
Easy	3,281 (96.64%)	1,136 (83.22%)	4,417 (92.79%)
Difficult	114 (3.36%)	229 (16.78%)	343 (7.21%)
Total	3,395 (100%)	1,365 (100%)	4,760 (100%)

p < 0.001.

Appendix 10.4 Fieldwork documents

Older People's Access to Services: The Impact of Service Change in Rural Areas

Indicative Information Sheet: Discussion Groups

The types of services available, and where these are located, have changed dramatically in recent decades. For example, many Post Offices have been closed or replaced with mobile services and smaller, independent shops have closed in favour of larger stores that may be on the edges of towns. Little is known about how these changes affect older people, especially those in rural areas.

What is the purpose of the study?

These discussion groups are part of a wider study looking into different aspects of changing access to services and the possible impact on older people in rural areas. It focuses on 'everyday' services, such as Post Office, local shops, supermarkets and banks.

I am interested in learning about your experiences of living in a rural area with changing access to services. I would also like to hear about how you manage to get services and goods when services change.

What would taking part involve?

You will be contacted to arrange taking part in a discussion group held in the village. There will be other people in the discussion group who you may, or may not, already know. The discussion will be audio recorded and then written up so that there is an accurate record of what was said.

You will be asked to share your views about changing services and what affect this might have had on you. There are not right or wrong answers and you do not have to agree with what others in the group may say.

How will my details and view be kept confidential?

All information that is collected during the research will be kept confidential in line with the Data Protection Act (1998).

The audio recordings and written records will be securely stored at the University of York. Only myself and my supervisors [names redacted] will have access to this information and it will be destroyed when they are no longer needed for the research.

If you choose to be involved in a discussion group, we would ask you to respect others confidentiality by not sharing the information discussed with people outside of the group.

We will not tell anyone that you have taken part in this research. If, however, you tell us that you or someone else is at risk of harm then we might have to tell someone about it. This would be discussed with you first.

This research has been approved by the Social Policy and Social Work Departmental Ethics Committee.

Do I have to take part?

No, it is completely up to whether you take part or not. If you do take part, you can withdraw and you do not have to give a reason.

What will happen after the discussion groups?

Once the information from the discussion groups has been analysed, I will send you a summary of what I have found out. I will use this information in my PhD thesis and in articles and presentations. I will not use your name, or anything else that could identify you, at any point.

Who can I contact for more information?

If you have any questions about the research, please contact:

[Researcher and supervisor contact details]

Older People's Access to Services: The Impact of Service Change in Rural Areas

Consent Form

Please tick if
you agree

I have been given an information sheet about the above study and have had time to consider it. ☐

I have had the opportunity to ask questions about the research and have had these answered satisfactorily. I feel I understand what the study involves. ☐

I understand that my participation in the [discussion group/interview] is voluntary and that I can withdraw at any time without giving a reason. ☐

I understand that the information I give to the researcher will be treated in strict confidence according to the Data Protection Act. ☐

I understand that the research reports will include my views along with the views of other people, but I will not be identified. ☐

I understand that the [discussion group/interview] will be digitally recorded so that a written transcript can be made. ☐

I understand that the researcher may have to speak to another person if I tell her that I or someone else is at risk of harm. ☐

I agree to take part in a [discussion group/interview]. ☐

Name _____

Signature _____

Date _____

Older People's Access to Services: The Impact of Service Change in Rural Areas

Indicative Topic Guide: Discussion group

****Consent forms**

1 WELCOME AND INTRODUCTIONS

Introduce self and colleague

- PhD student with the Social Policy Research Unit at The University of York

Explain the background and purpose of the project

- Discussion group part of wider project looking into changing services (such as shops, buses and Post Offices) and the possible impact on older people in rural areas
- How do older people adapt to changing services, what considerations are made and how the effects of service change can be lessened
- Linking this to policy ideas of helping people to remain independent and in their own homes for longer

Explain confidentiality and anonymity

- I will keep your information confidential, in line with the Data Protection Act
- Keep your views anonymous when writing up the research

Group discussion is key:

- Respect the confidentiality of others' comments
- Respect others' views
- No right or wrong answers
- Don't need to reach a group view – range of opinions encouraged
- Don't need to wait for questions, speak directly to me
- Please indicate to me at any point if you feel uncomfortable or want to take a break

Is everyone happy to continue?

****Switch on recorders****

2 PARTICIPANT INTRODUCTIONS

Participants – introduce yourselves:

- Your name
- How long you've lived in [village]
- A sentence about what you think is the best thing about living here

3 CHANGES AND THEIR CONSEQUENCES

Have you noticed any changes to the services you use in the village and local area?

- Have any services closed down?
- Have any services changed their opening hours/regularity of service?
- Have there been any changes to how services are delivered?
- Post Office
- Buses
- Shops
- Mobile services

Thinking about [village], what do you think are the consequences (positive or negative) of changes to services for older people?

- Do you think a change to one service affects others?
- Do other services pick up the slack?
- Are pressures put on other services?
- Who do you think people could rely on for help?

4 MITIGATING IMPACT

How do you think older people could lessen the impact of any negative consequences of service change?

- Could and would the village community help?
- Could and would older people group together to help with journeys?
- What about online services, such as shopping and banking?
- Are there any charity or community initiatives to help?

What factors do you think affect a person's ability to adapt to these changes?

- What about the skills a person might have? – driving
- Do you think material resources matter?
- Is it beneficial to know other people in the village/local area?
- What about the health of the person?

5 THINKING TO THE FUTURE

Is this village a good place to grow older?

- What makes you think this?
- Would you change anything?
- Would you recommend it as a place for retirement to friends or family?

THANKS AND CLOSE

Is there anything that you would like to add before we finish?

Is there anything you expected me to cover that I haven't?

Do you have any questions about the research or the use of data?

What happens next?

- Summary of findings from the research here will be sent to you

Thanks and close

Appendix 10.5 Framework development

Framework 1

1. Village community
 - 1.2 Mix of people
 - 1.2.1 Families
 - 1.2.2 Tradesmen
 - 1.2.3 Older community
 - 1.2.4 Younger people leaving
 - 1.3 Housing
 - 1.4 Community spirit
 - 1.4.1 Decreasing
 - 1.4.2 Groups/cliques
 - 1.4.3 Friendliness
 - 1.4.4 Neighbours looking out
 - 1.4.5 Offering support
 - 1.5 Safety
2. Transport
 - 2.1 Car use
 - 2.1.1 Driving to own abilities
 - 2.1.2 Giving up driving
 - 2.1.3 Fuel costs
 - 2.2 Bus
 - 2.2.1 Barriers to use
 - 2.2.2 Shelters
 - 2.2.3 Under used
 - 2.2.4 Social
 - 2.2.5 Bus drivers
 - 2.3 Dependence on transport
 - 2.4 Independence
3. Social groups/societies/clubs
 - 3.1 Barriers to joining
 - 3.2 Difficulty engaging
 - 3.3 Difficulty disseminating information
 - 3.4 Availability
4. Service cuts
 - 4.1 Post Office
 - 4.1.1 Reliability
 - 4.1.2 Limited opening hours
 - 4.1.3 Queuing outside
 - 4.1.4 Steps
 - 4.1.5 Privacy
 - 4.1.6 Loss of meeting place
 - 4.2 Bus
 - 4.3 Loss of garages and petrol pumps
 - 4.4 Loss of local employment
 - 4.5 Mobile services

4.6 Shop

5. Impact of change

5.1 Making do

5.2 Resistance to change

5.3 Personal limits

5.4 Wealth/money

5.5 Adjusting

5.5.1 Adjusting to village life from urban

6. Existing services

6.1 Mobile services

6.2 Sustainability

6.3 Community transport

6.4 Shop

6.5 Pub

6.6 Library

6.7 Sports and social club

6.8 Newsletter

6.9 Churches

6.10 School

6.11 Internet

7. Ageing in village

7.1 Rural lifestyle

7.2 Volunteering

7.3 Enjoying countryside

7.4 Retiring to village

7.5 Joining in/ acceptance

Framework 2

1. Social environment of village
 - 1.1. Mix of people
 - 1.1.1. Families
 - 1.1.2. Older people
 - 1.1.3. Younger people (leaving)
 - 1.1.4. Mix of occupations
 - 1.2. Housing
 - 1.3. Community spirit
 - 1.3.1. Decreasing?
 - 1.3.2. Groups/cliques
 - 1.3.3. Friendliness
 - 1.3.4. Neighbours looking out
 - 1.3.5. Offering support
 - 1.3.6. Safety
 - 1.4. Social groups/societies/clubs
 - 1.4.1. Availability
 - 1.4.2. Loss
 - 1.4.3. Disseminating information
 - 1.4.4. Difficulty engaging
 - 1.4.5. Barriers to joining
 - 1.4.6. Role/importance
2. Transport
 - 2.1. Car
 - 2.1.1. Car use
 - 2.1.2. Driving to own abilities
 - 2.1.3. Fuel costs
 - 2.1.4. Giving up driving
 - 2.2. Bus
 - 2.2.1. Bus use
 - 2.2.2. Social
 - 2.2.3. Drivers
 - 2.2.4. Barriers to use
 - 2.2.5. Under used
 - 2.3. Importance of transport
3. Service cuts/loss
 - 3.1. Post Office (permanent)
 - 3.1.1. Loss of meeting place
 - 3.1.2. Inconvenience
 - 3.2. Bus
 - 3.3. Garages and petrol pumps
 - 3.4. Mobile services
 - 3.5. Shop
 - 3.6. Implications (overall)

4. Remaining services (including change)
 - 4.1. Post Office (mobile)
 - 4.1.1. Reliability
 - 4.1.2. Limited opening hours
 - 4.1.3. Queuing outside
 - 4.1.4. Steps
 - 4.1.5. Privacy
 - 4.2. Other mobile services
 - 4.3. Community transport
 - 4.4. Pub
 - 4.5. Library
 - 4.6. Sports and social club
 - 4.7. Tradesmen/small businesses
 - 4.8. Sustainability
5. Managing change
 - 5.1. Making do
 - 5.2. Resistance to change
 - 5.3. Personal limits
 - 5.4. Wealth/money
 - 5.5. Adjusting
 - 5.5.1. Adjusting to rural life from urban
6. Village amenities
 - 6.1. Churches
 - 6.2. School
 - 6.3. Internet
 - 6.4. Sports field
 - 6.5. Village hall
 - 6.6. Bus shelters
 - 6.7. Post boxes
7. Ageing in village
 - 7.1. Rural lifestyle
 - 7.2. Volunteering
 - 7.3. Enjoying countryside
 - 7.4. Retiring to village
 - 7.5. Joining in
 - 7.6. Acceptance

Framework 3

1. Social environment of village
 - 1.1. Mix of people
 - 1.2. Housing
 - 1.3. Community spirit
 - 1.4. Social groups/societies/clubs
2. Transport
 - 2.1. Car
 - 2.2. Bus
 - 2.3. Importance of transport
3. Service cuts/loss
 - 3.1. Post Office (permanent)
 - 3.2. Bus
 - 3.3. Garages and petrol pumps
 - 3.4. Mobile services
 - 3.5. Shop
 - 3.6. Implications (overall)
4. Remaining services (including change)
 - 4.1. Post Office (mobile)
 - 4.2. Other mobile services
 - 4.3. Community transport
 - 4.4. Pub
 - 4.5. Library (mobile)
 - 4.6. Sports and social club
 - 4.7. Tradesmen/small businesses
 - 4.8. Sustainability
 - 4.9. Shop
 - 4.10. Village amenities
5. Managing change
 - 5.1. Making do
 - 5.2. Resistance to change
 - 5.3. Personal limits
 - 5.4. Personal resources
 - 5.5. Coping mechanisms
 - 5.6. Adjusting to rural life from urban
6. Ageing in village
 - 6.1. Rural lifestyle
 - 6.2. Volunteering
 - 6.3. Enjoying countryside
 - 6.4. Retiring to village
 - 6.5. Joining in
 - 6.6. Acceptance

Framework 4

Elements that make the village a good place to live (and grow older in)

1. Active village social environment
 - 1.1. Societies/clubs
 - 1.2. Events
 - 1.3. Meeting places
 - 1.4. Friendliness
2. Valuing the mixed community
 - 2.1. Wanting mixed and affordable housing
 - 2.2. School as an attraction
 - 2.3. Appreciating the mix of ages and occupations
3. Neighbourliness
 - 3.1. Neighbours looking out
 - 3.2. Offering support
 - 3.3. Cliques
4. Valuing the rural lifestyle
 - 4.1. Countryside
 - 4.2. Relaxing environment
 - 4.3. Roots

Concerns for the future of the village

5. Concerns of service change/loss affecting social environment of village
 - 5.1. Loss of meeting places
 - 5.2. Mix of people
 - 5.3. Impression of village
6. Concern about weakening community cohesion
 - 6.1. Difficulty engaging people
 - 6.2. Some loss of village events and clubs

Attitudes towards service environment of village

7. Approaches to the lack of, or change in, services
 - 7.1. Reducing frequency of service need
 - 7.2. Finding alternatives
 - 7.3. Coping
 - 7.4. Necessity of transport
8. Services having a social/community role
 - 8.1. Providing meeting places for social interaction
 - 8.2. Reaching vulnerable or isolated people
9. Protectiveness of services for community
 - 9.1. Concern about impact of change

- 9.2. Concern about stability of services
- 9.3. Sustaining services
- 9.4. Resistance to change

Framework 5

Elements that make the village a good place to live (and grow older in)

1. Active village social environment
 - 1.1. Societies/clubs
 - 1.2. Events
 - 1.3. Meeting places
2. Valuing the mixed community
 - 2.1. Wanting mixed and affordable housing
 - 2.2. Wanting a mix of generations
 - 2.2.1. School as attraction
 - 2.3. Appreciating the mix of occupations in village
3. Neighbourliness
 - 3.1. Neighbours looking out
 - 3.2. Offering support
 - 3.3. Occurring within housing groups
4. Enjoying the rural location of village
 - 4.1. Countryside around village
 - 4.2. Proximity to areas of natural beauty
 - 4.3. Space
5. Feeling 'at home' in village
 - 5.1. Friendliness
 - 5.2. Sense of belonging
 - 5.2.1. Sense of division
 - 5.3. Roots

Concerns for the future of the village

6. Concerns of service change/loss affecting social environment of village
 - 6.1. Loss of meeting places
 - 6.2. Affecting the mixed community
 - 6.3. Impression of village
7. Concern about weakening community cohesion
 - 7.1. Difficulty engaging people
 - 7.2. Some loss of village events and clubs
 - 7.3. Reduced interaction associated with modern life

Attitudes towards service environment of village

8. Approaches to the lack of, or change in, services
 - 8.1. Reducing frequency of service need
 - 8.2. Finding alternatives
 - 8.3. Coping
 - 8.4. Necessity of transport

- 9. Services having a social/community role
 - 9.1. Providing meeting places for social interaction
 - 9.2. Reaching vulnerable or isolated people
- 10. Protectiveness of services for community
 - 10.1. Concern about impact of change
 - 10.2. Concern about stability of services
 - 10.3. Sustaining services
 - 10.4. Resistance to change

Definitions

BBC – The British Broadcasting Corporation

BIS – Department for Business, Innovation and Skills

cloglog – Complementary Log Log

CRC – Commission for Rural Communities

DCLG – Department for Communities and Local Government

Defra – Department for Environment, Food and Rural Affairs

DfT – Department for Transport

DWP – Department for Work and Pensions

EHA – Event History Analysis

ELSA – English Longitudinal Study of Ageing

FOI – Freedom of Information

HSE – Health Survey for England

km – Kilometres

LA – Local Authority

LU – Large Urban

MU – Major Urban

NCP – Network Change Programme

NRP – Network Reinvention Programme

Ofcom – The Office of Communications

ONS – Office for National Statistics

OU – Other Urban

PIN – Personal Identification Number

PO – Post Office

POCA – Post Office Card Account

RERC – Rural Evidence Research Centre

R50 – Rural 50

R75 – Rural 75

SR – Significant Rural

SRA – Social Research Association

UK – United Kingdom

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